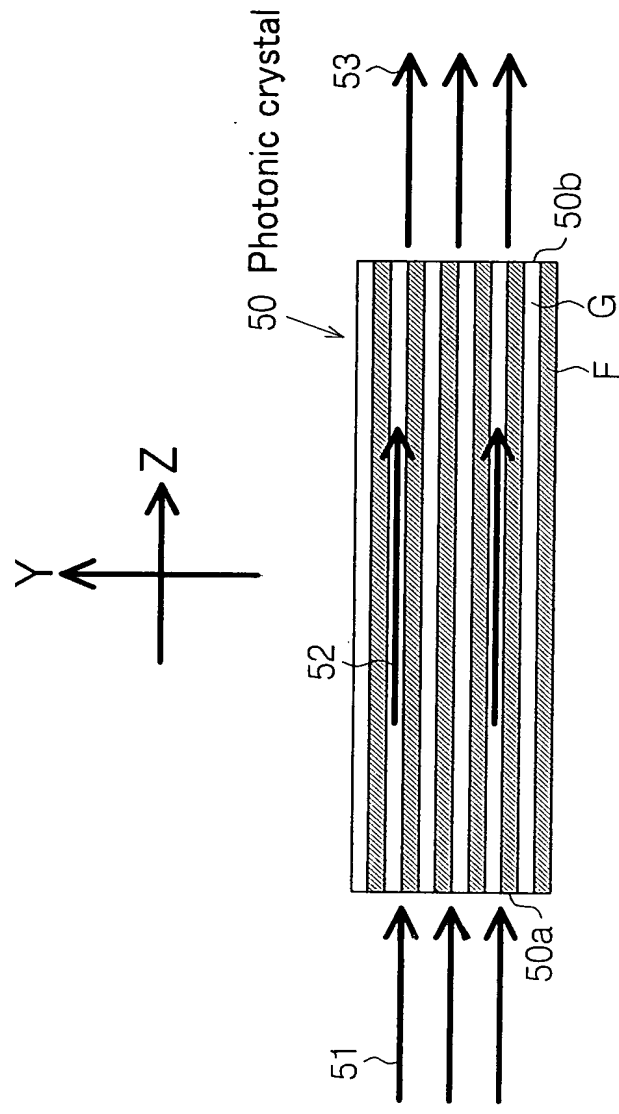


Fig.1



1st photonic band

2nd photonic band

3rd photonic band

Fig. 3

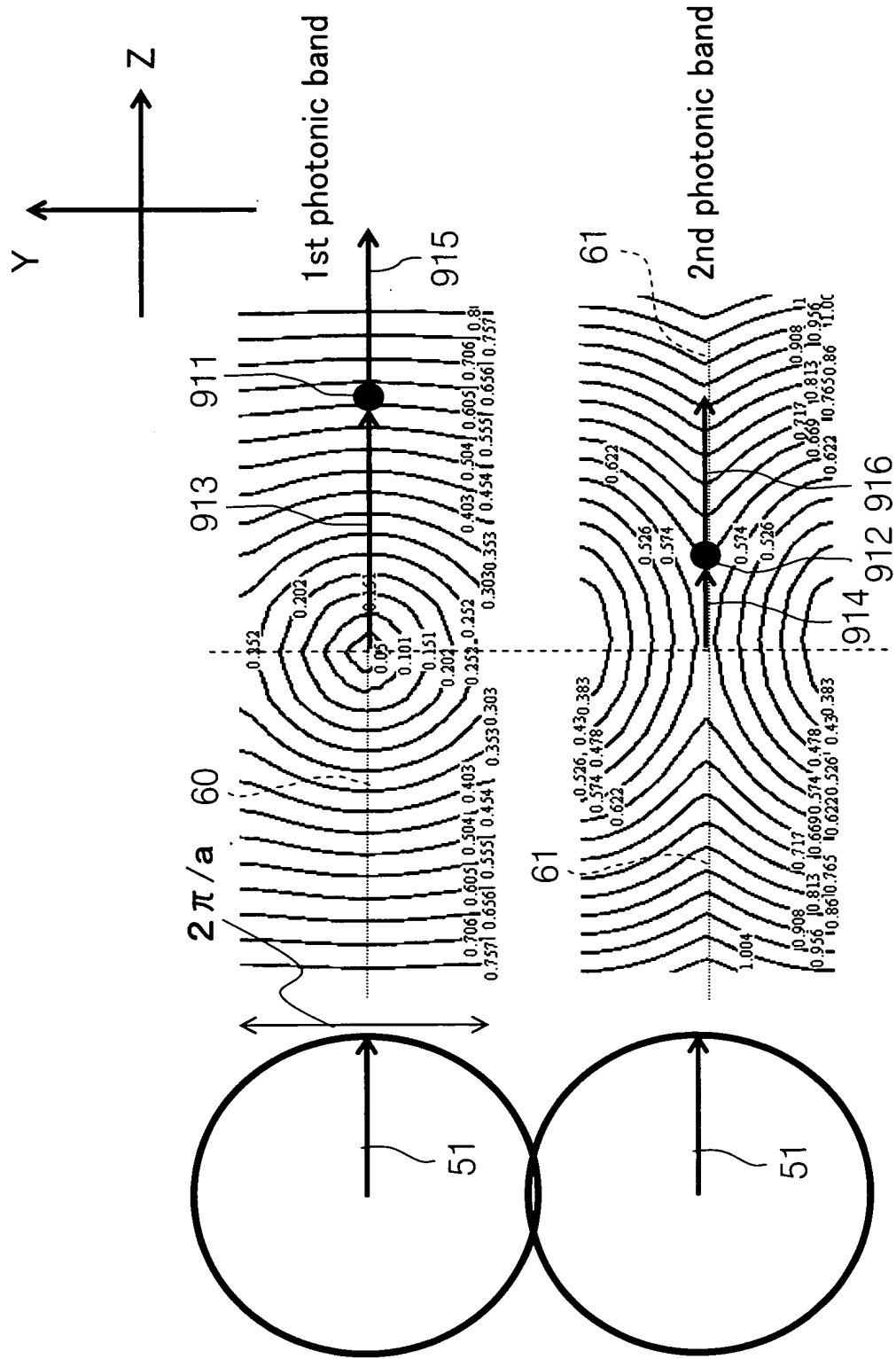
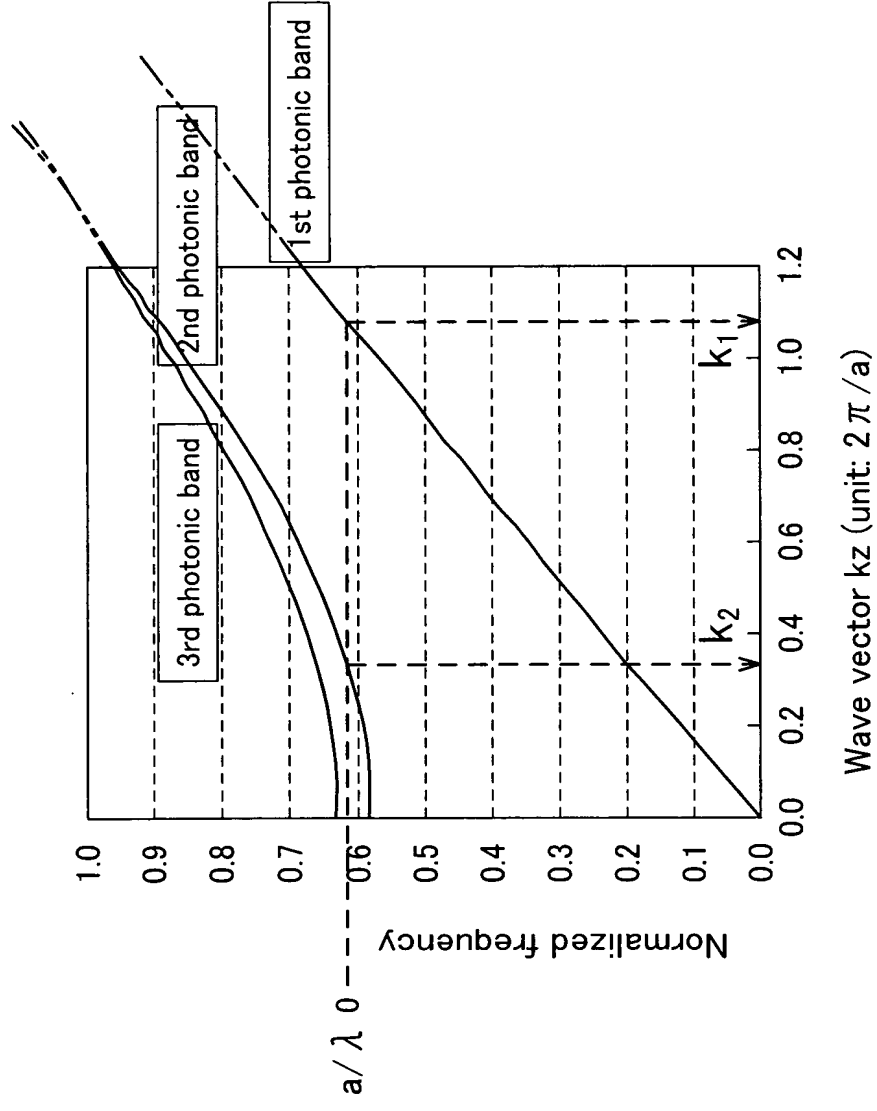
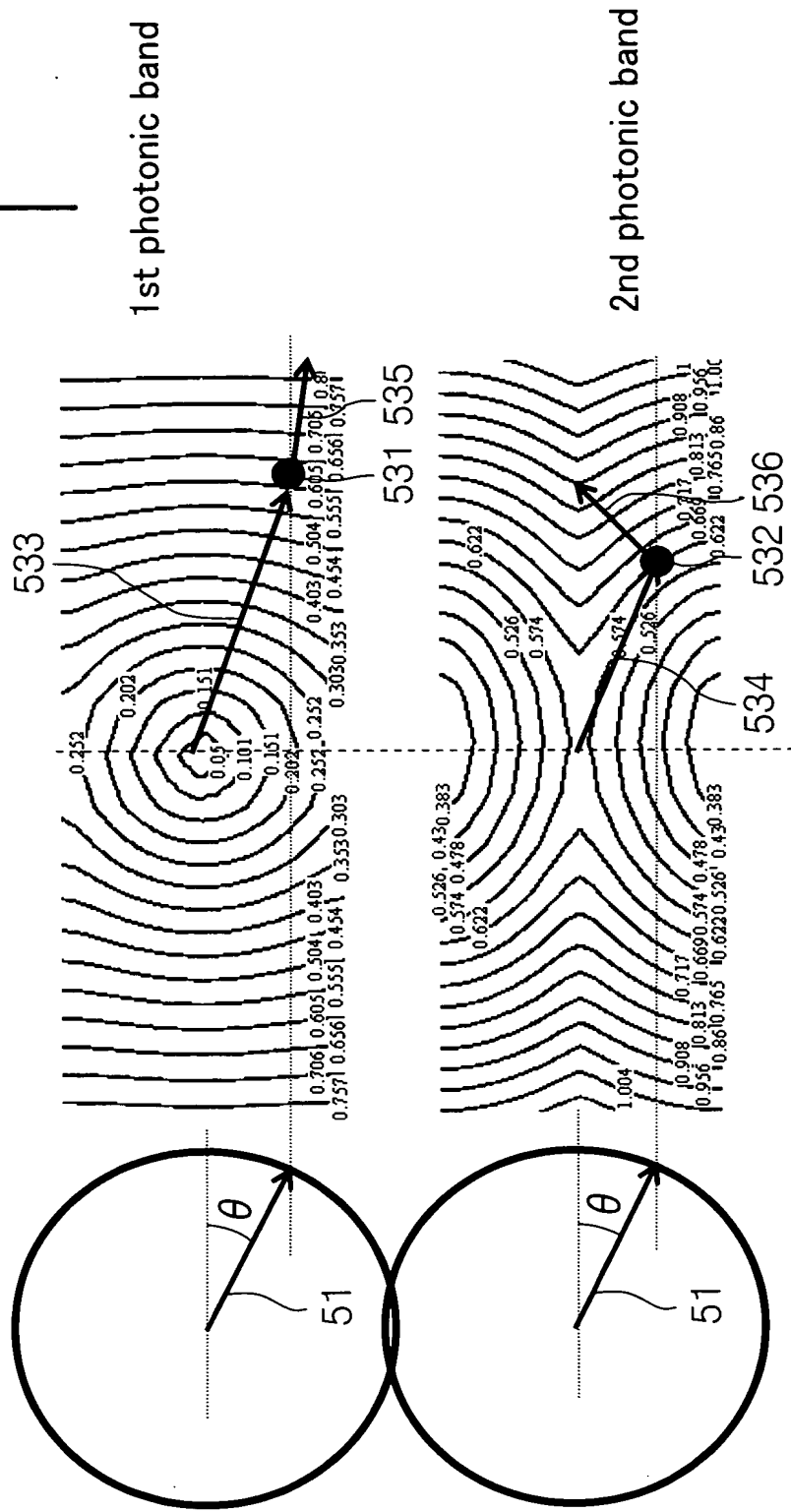


Fig.4





1.6

Circle with radius = $n \cdot (a / \lambda_0)$ (unit : $2\pi / a$)

1st photonic band

2nd photonic band

613

614

615

100a

100b

51

θ

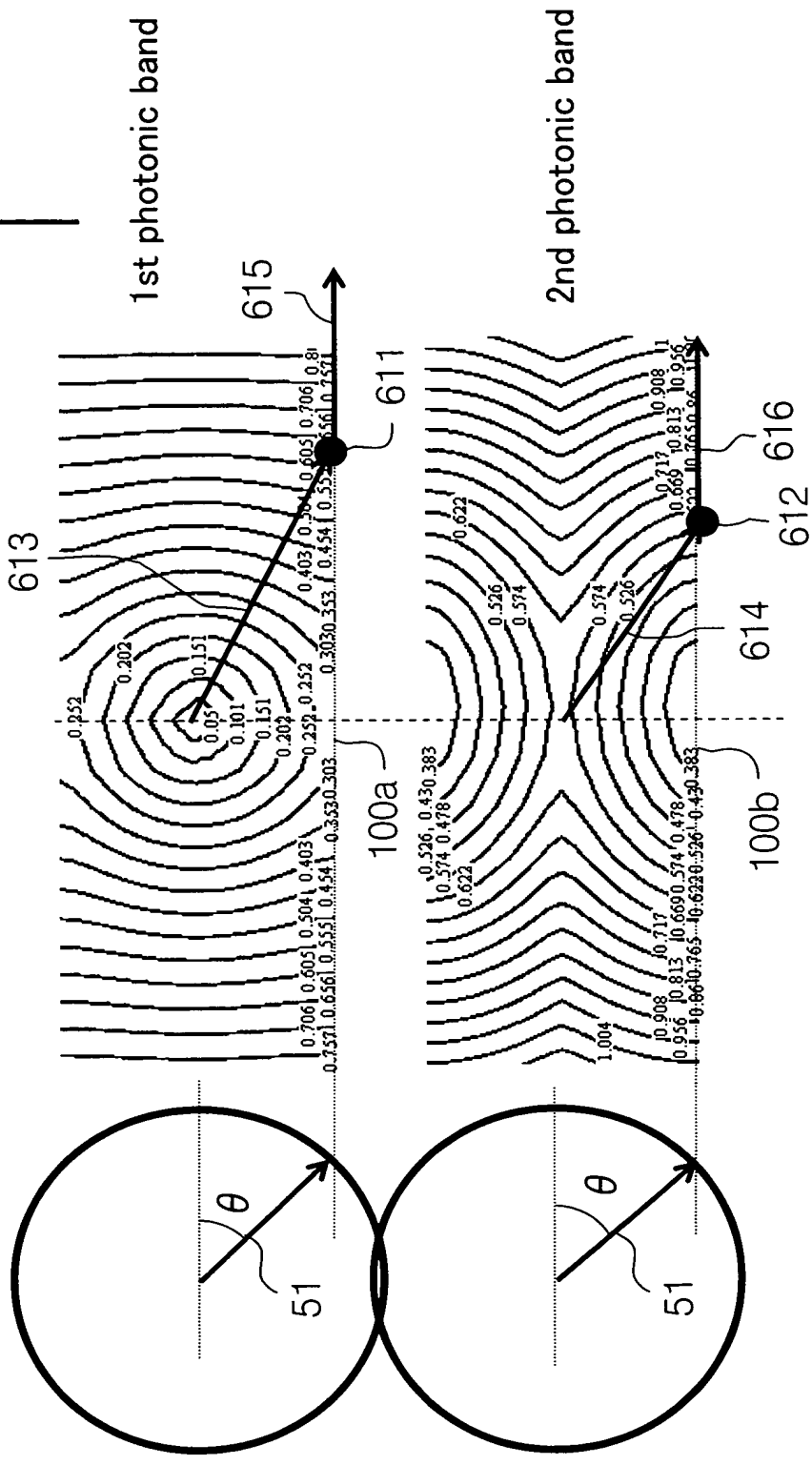


Fig.7

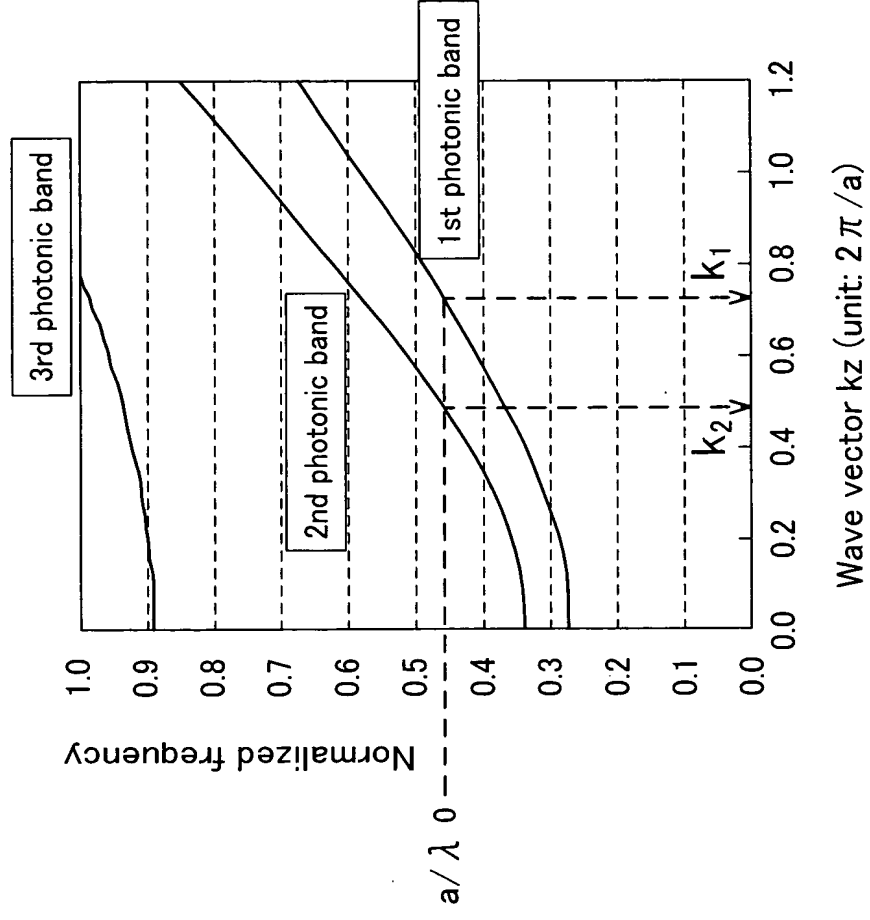


Fig.8

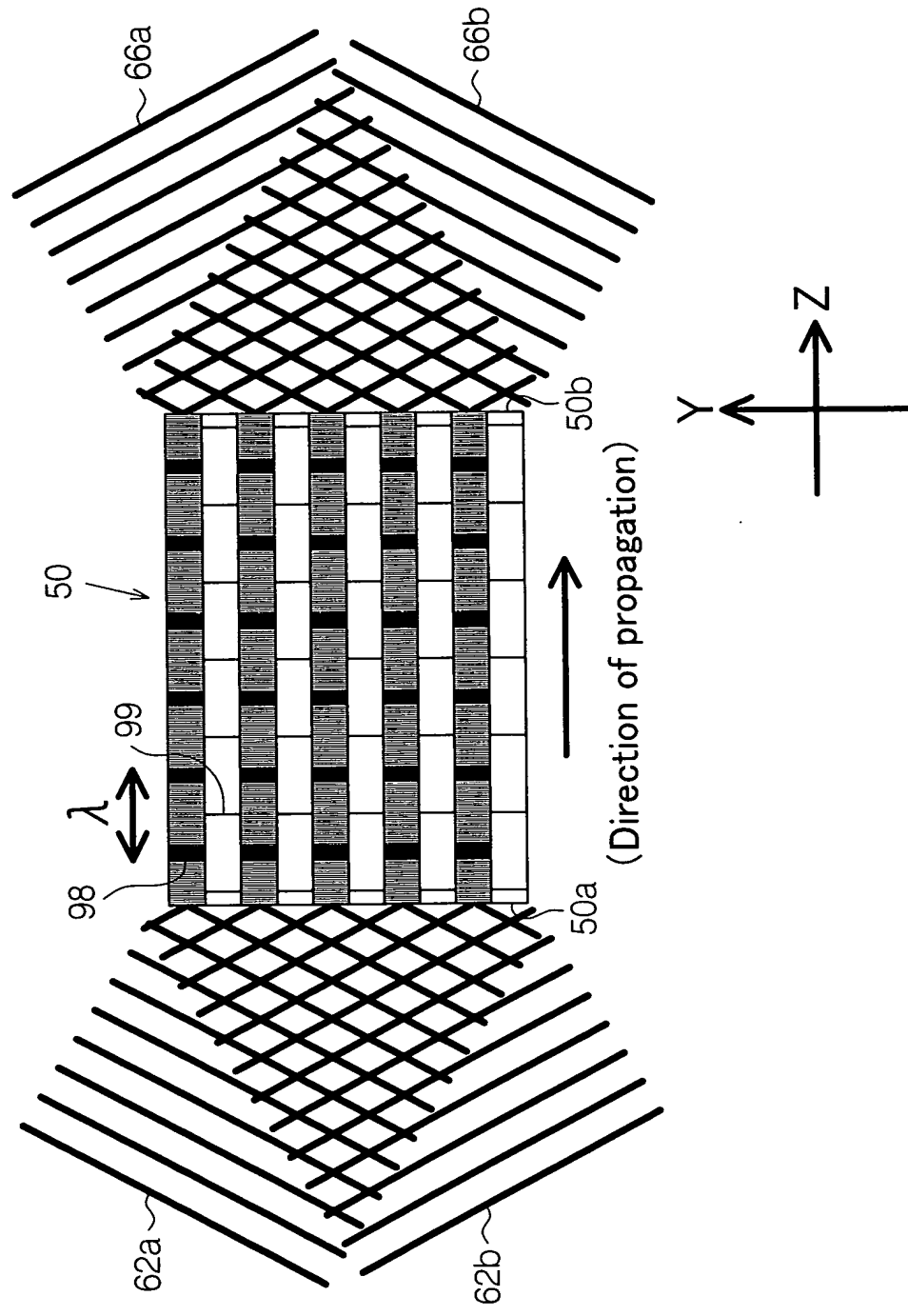


Fig. 9

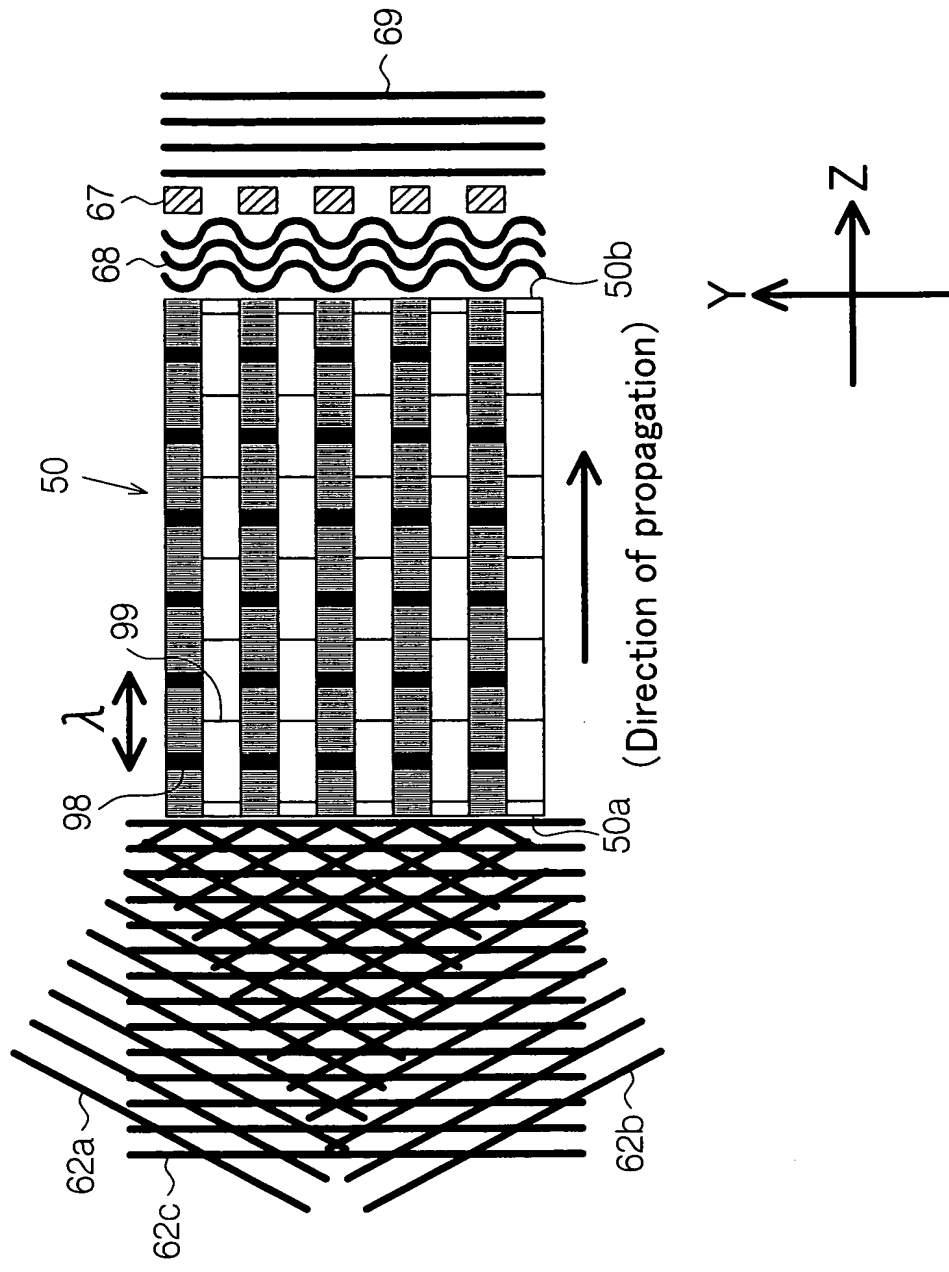


Fig.10

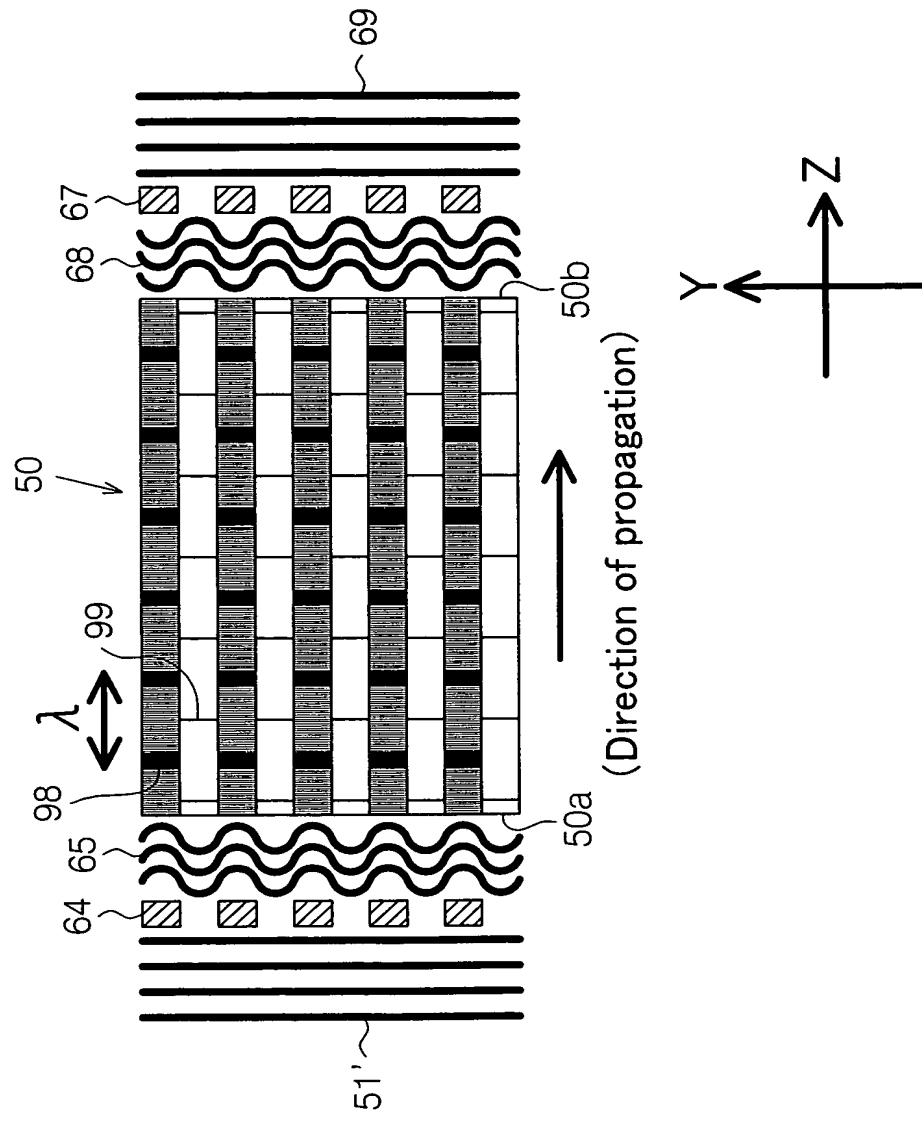


Fig. 11

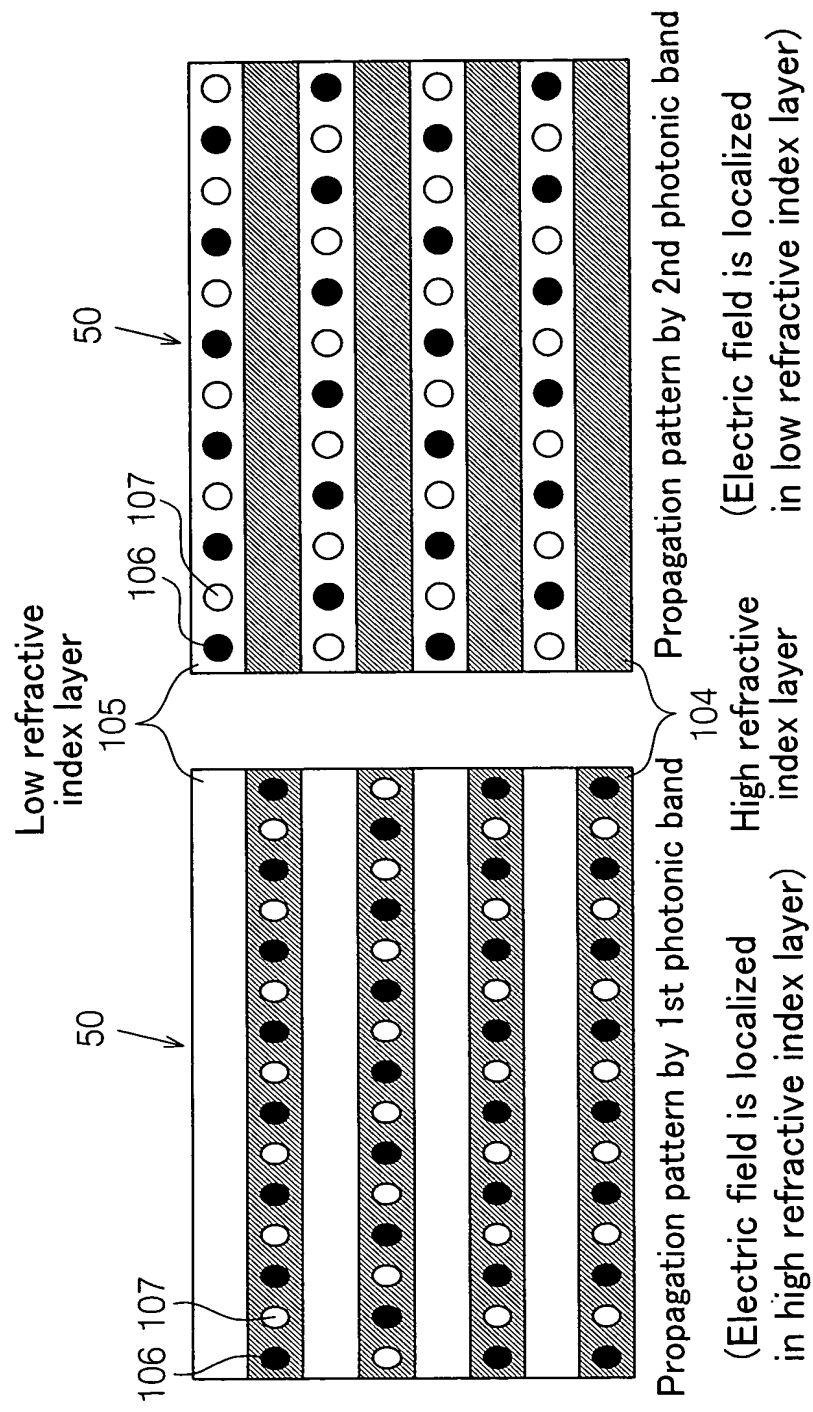
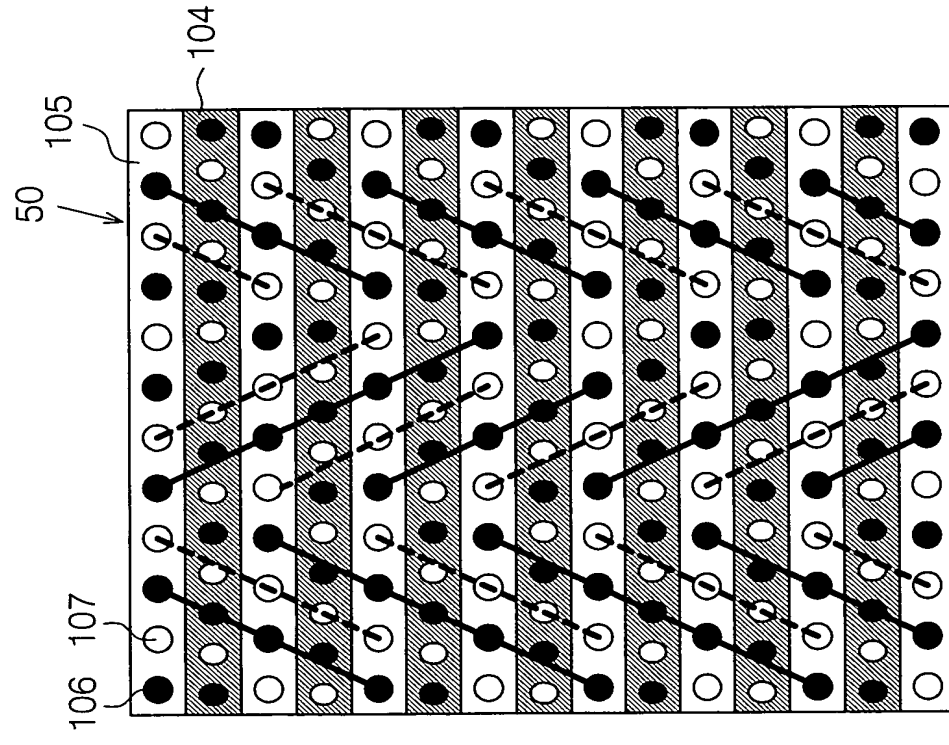


Fig.12



Propagation pattern by 1st and 2nd photonic bands

Fig. 13

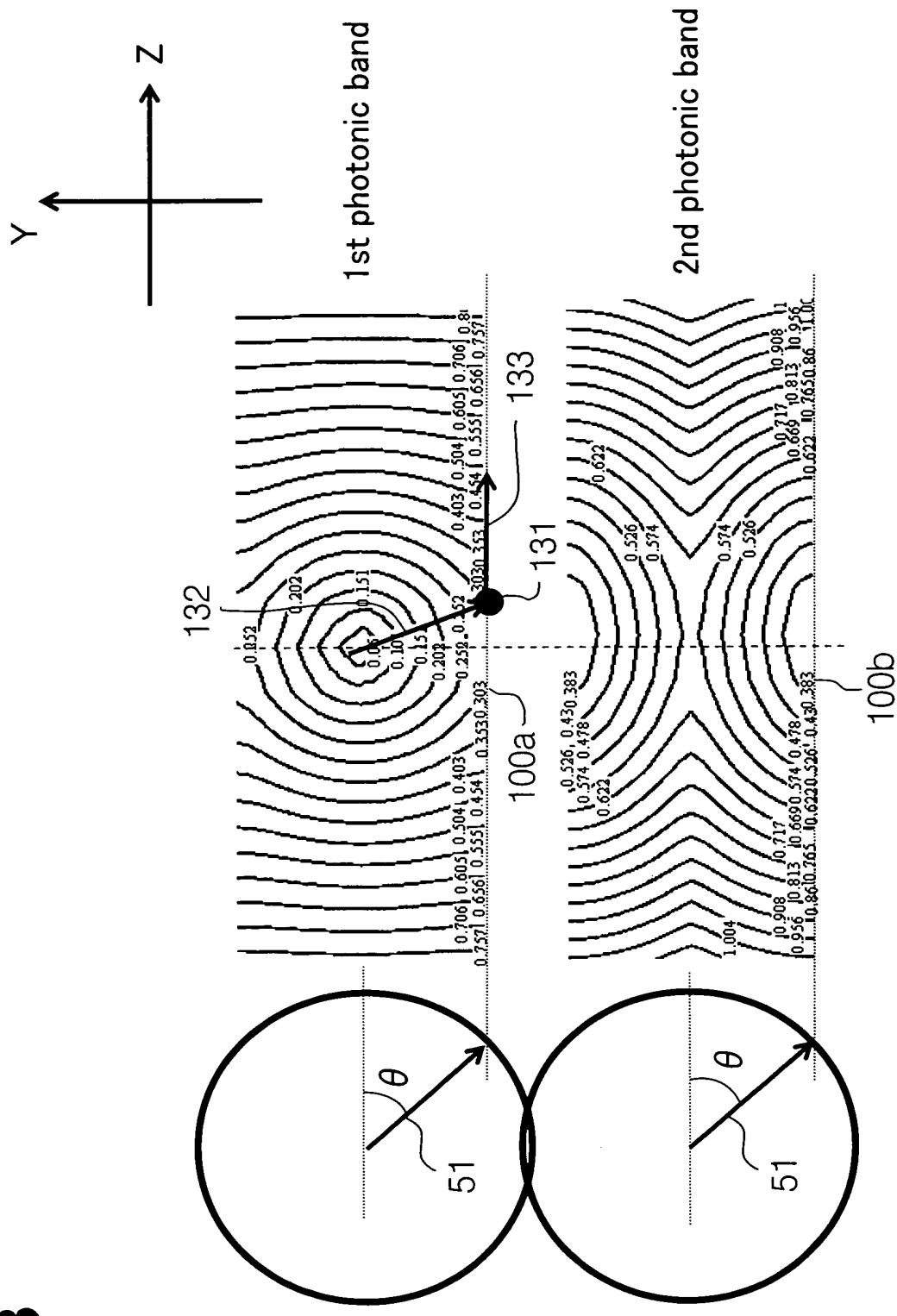


Fig.14

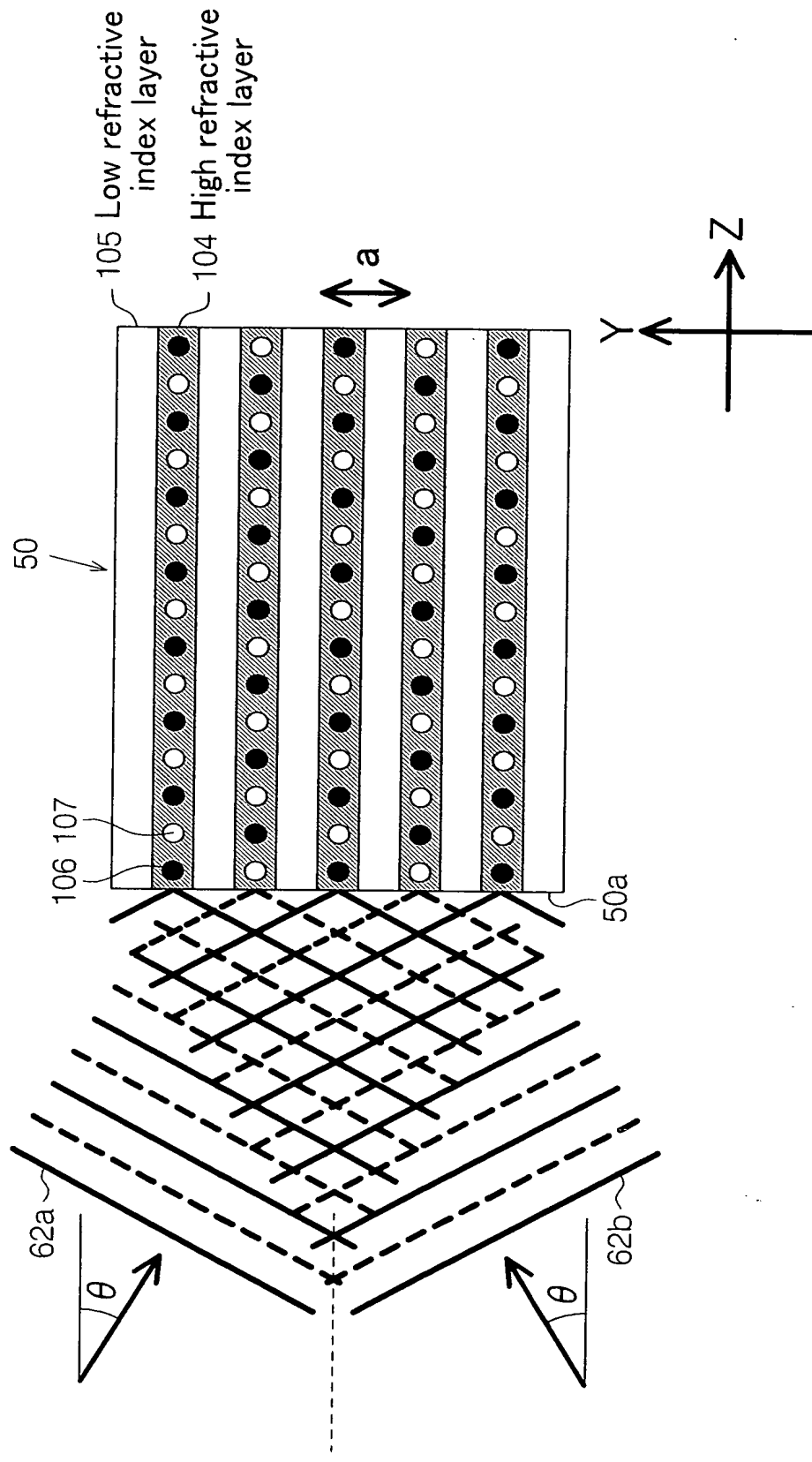


Fig.15

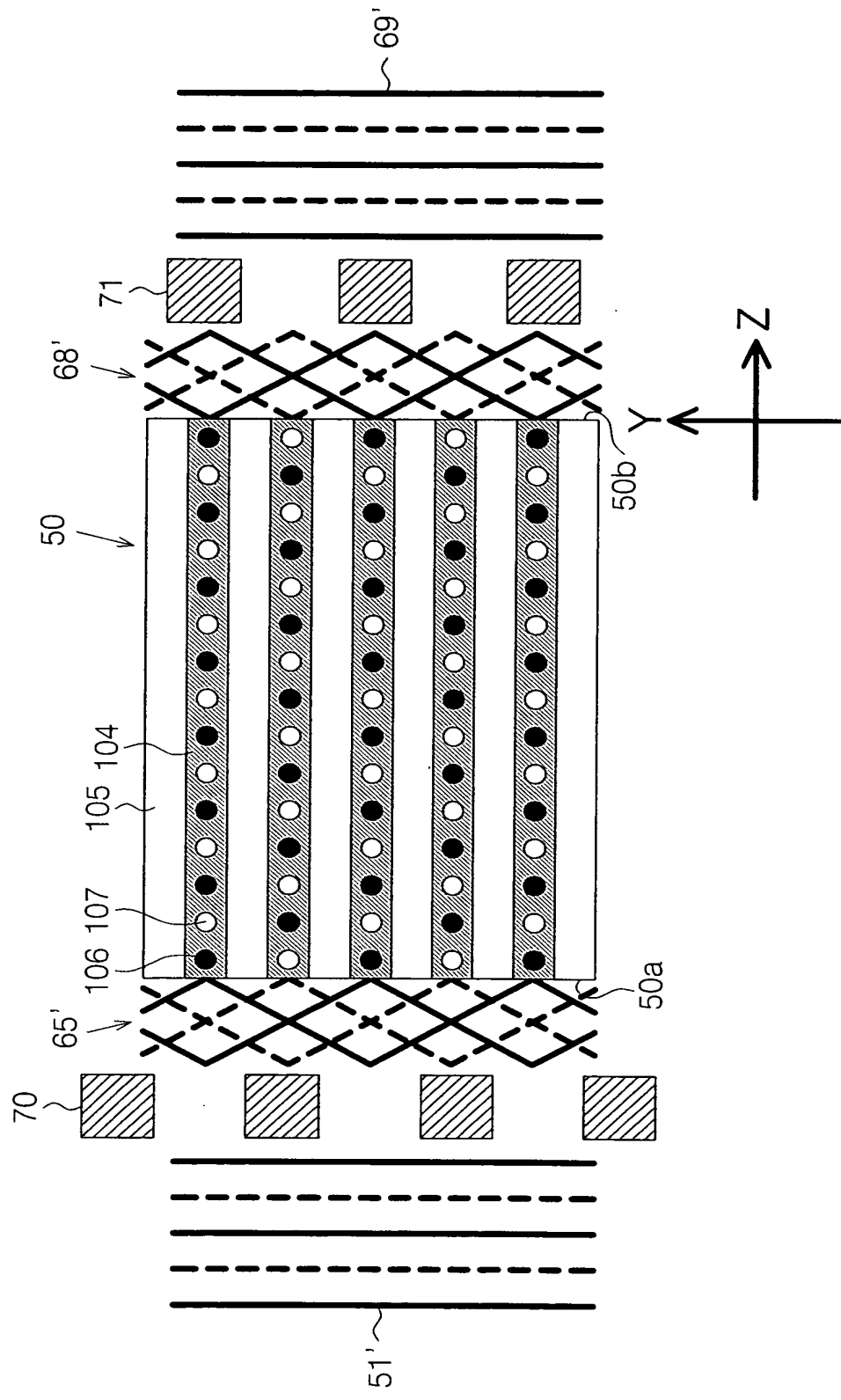


Fig. 16

Directions of diffracted light depends on position of end facet in zigzag propagation pattern.

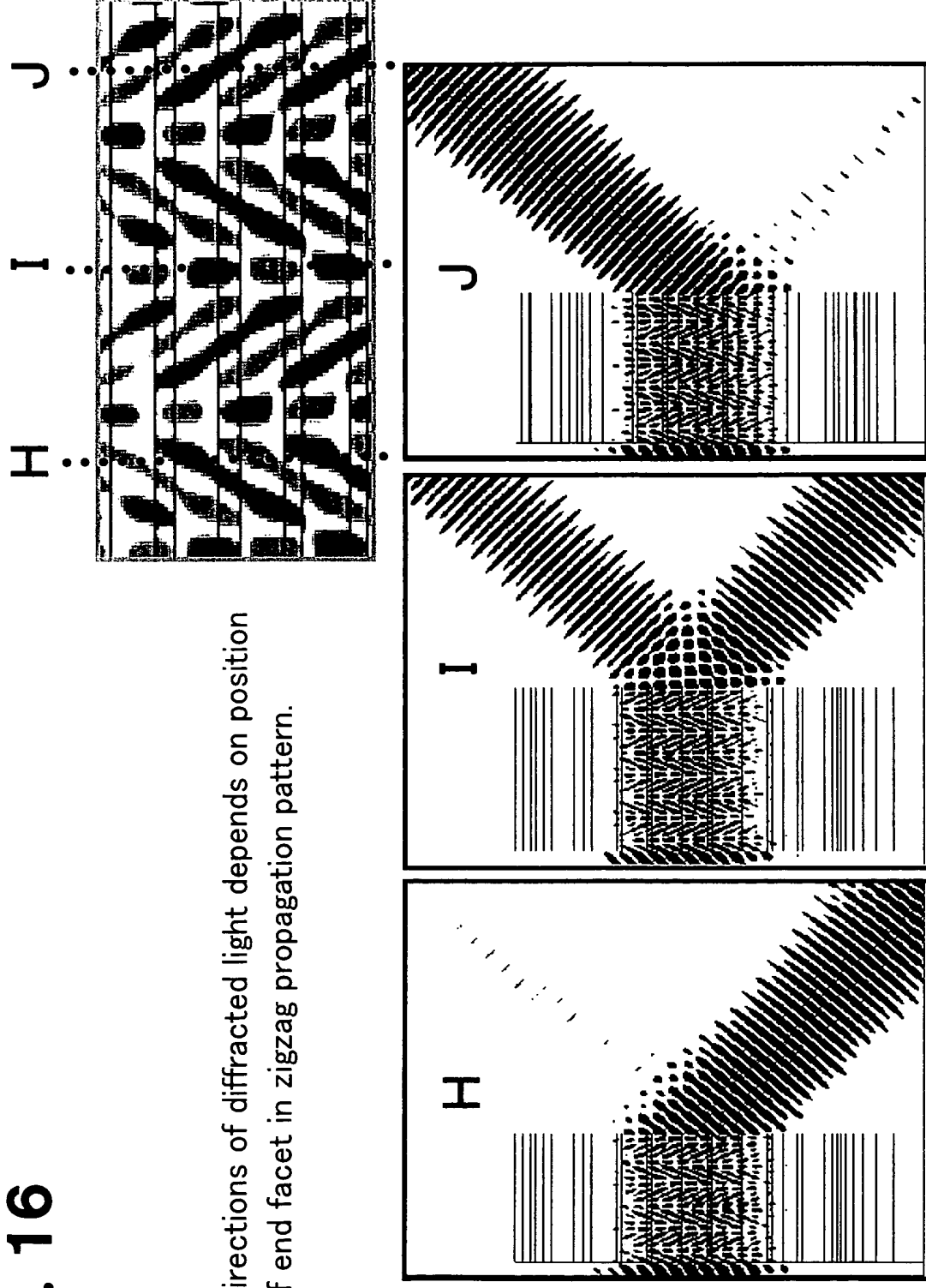


Fig. 17

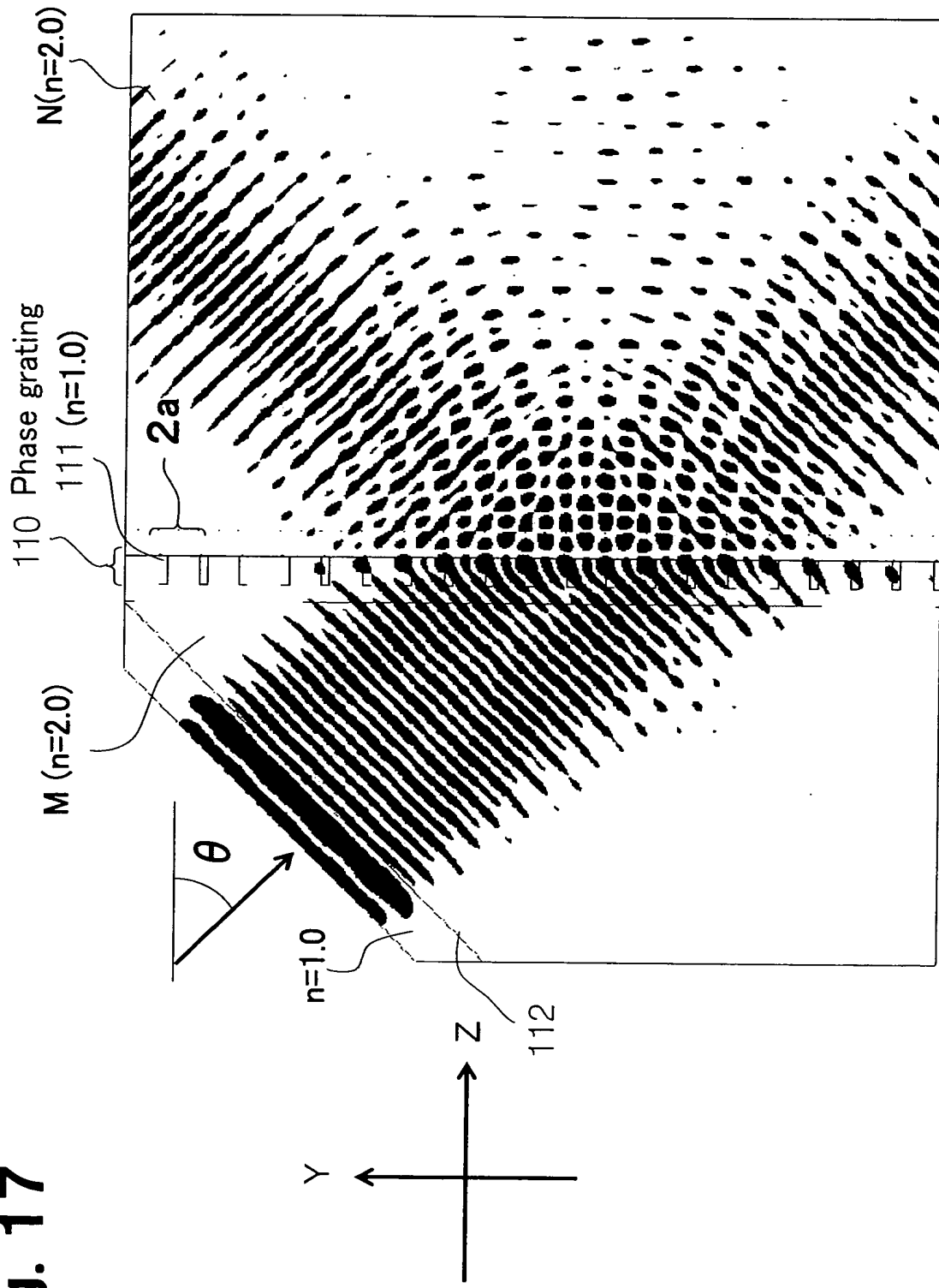


Fig. 18

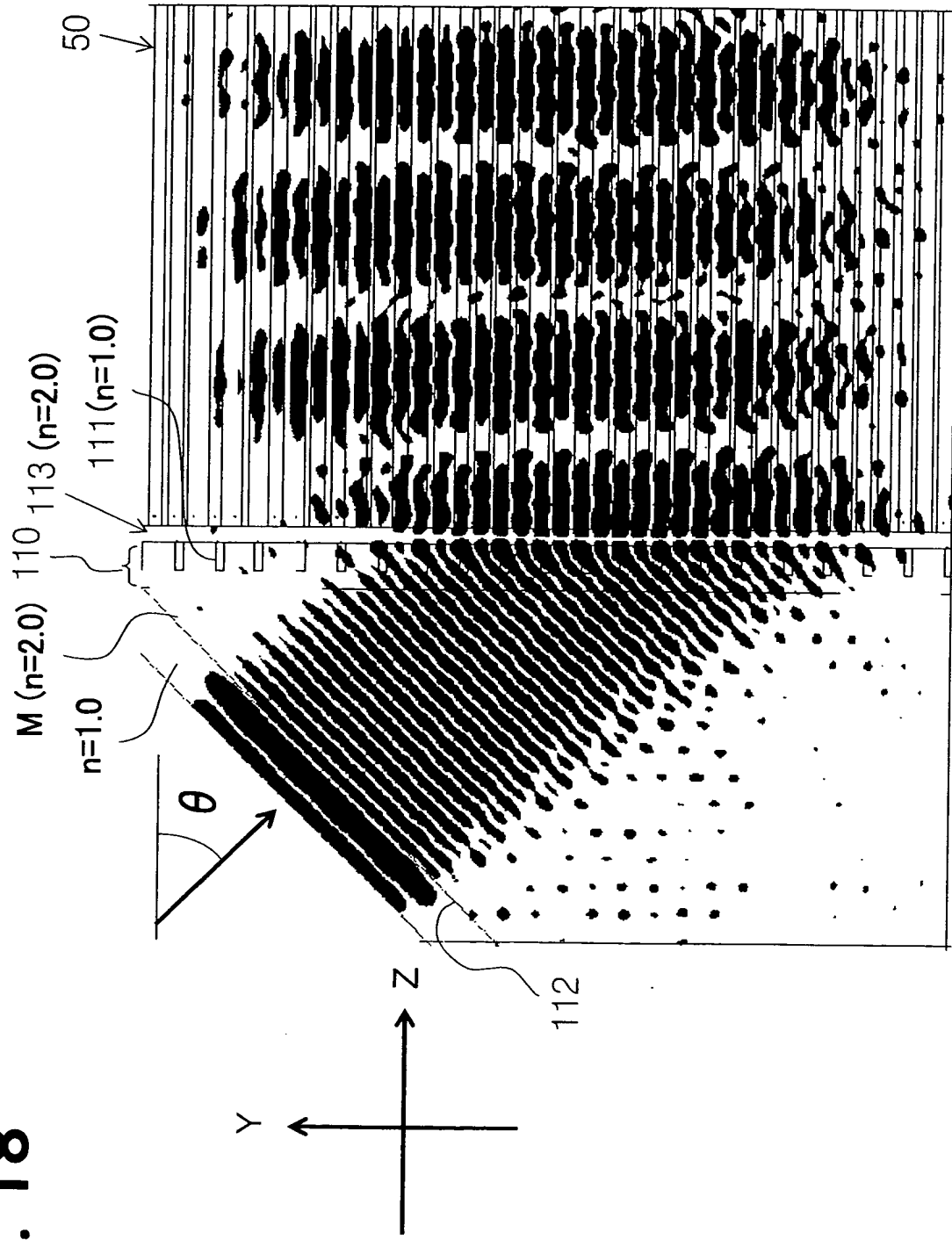


Fig. 19(a)

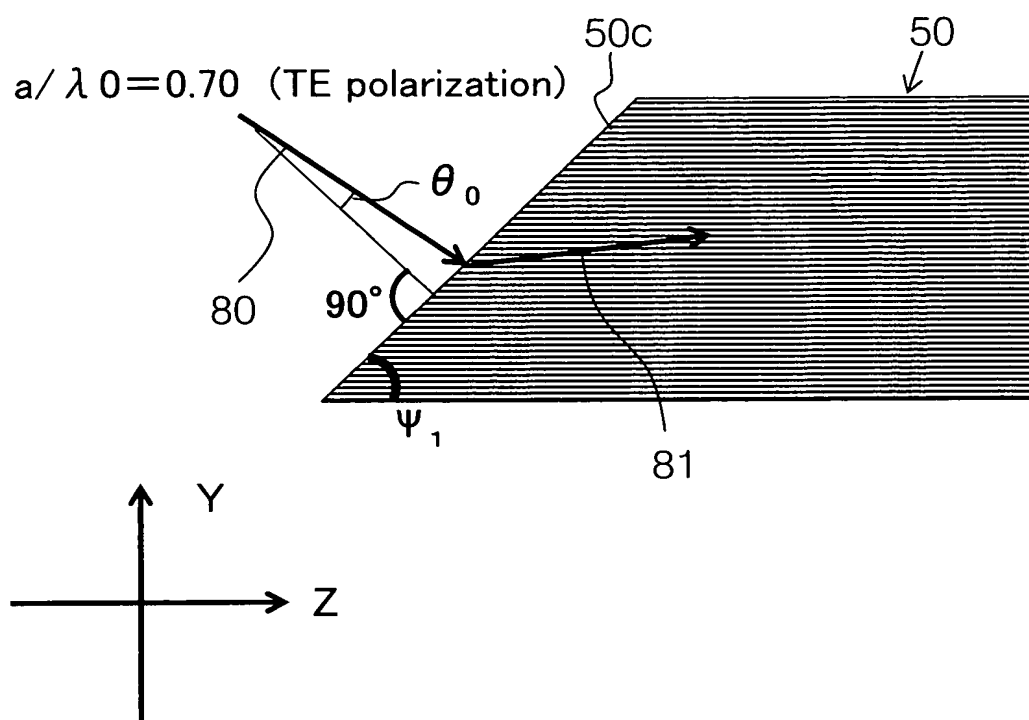


Fig. 19(b)

(Circle with radius of 0.70)

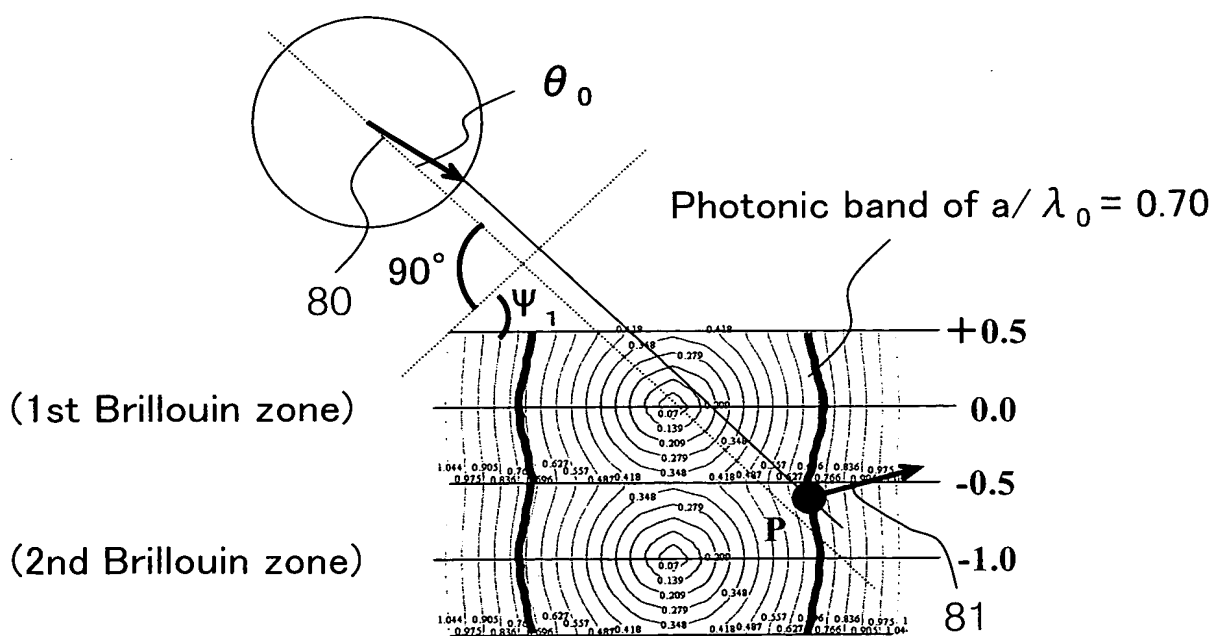


Fig.20

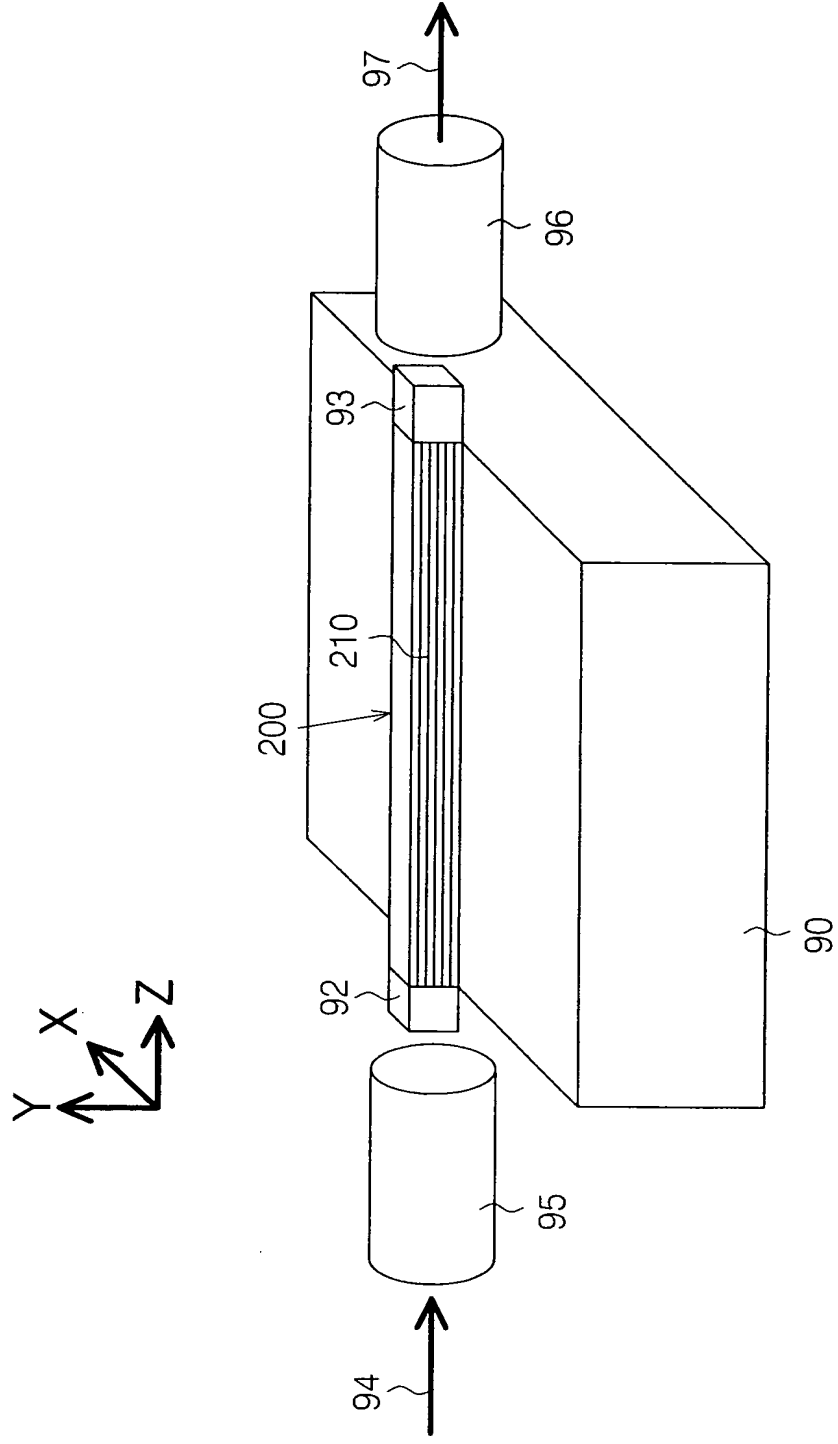


Fig.21

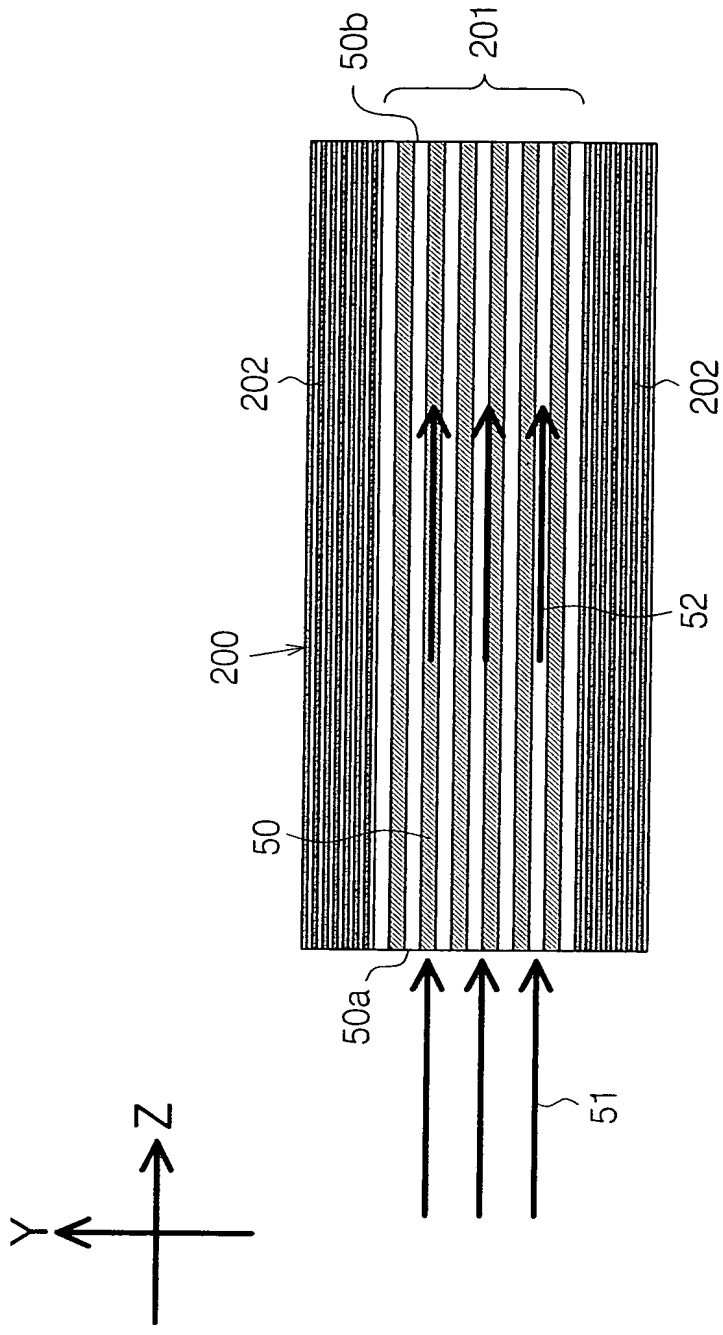


Fig. 22

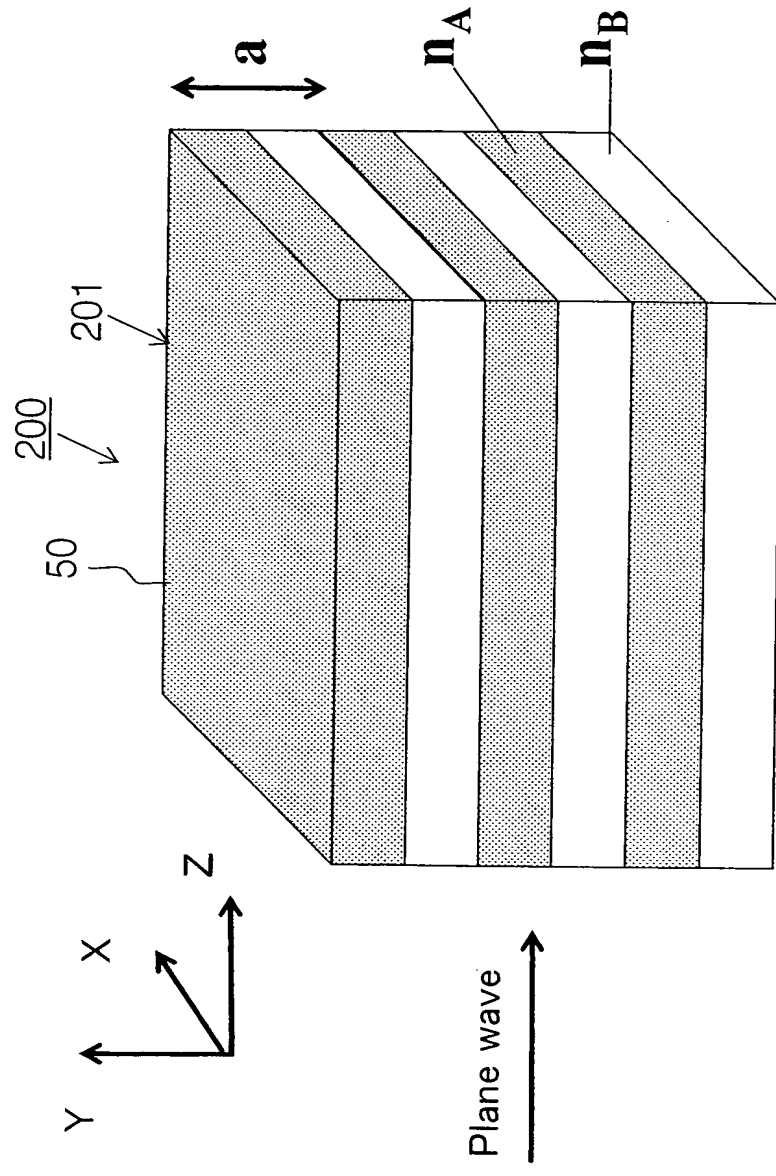


Fig. 23

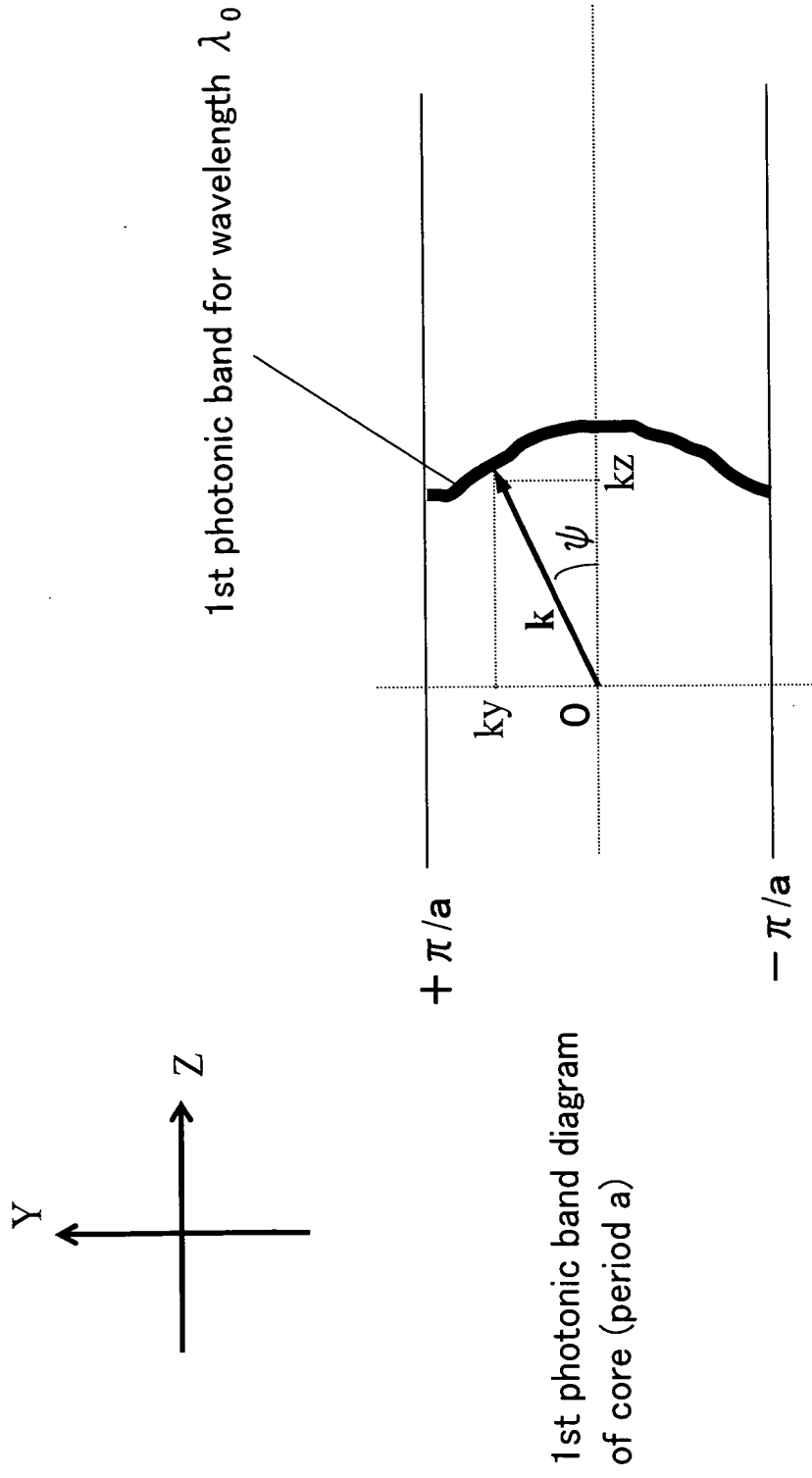


Fig. 24

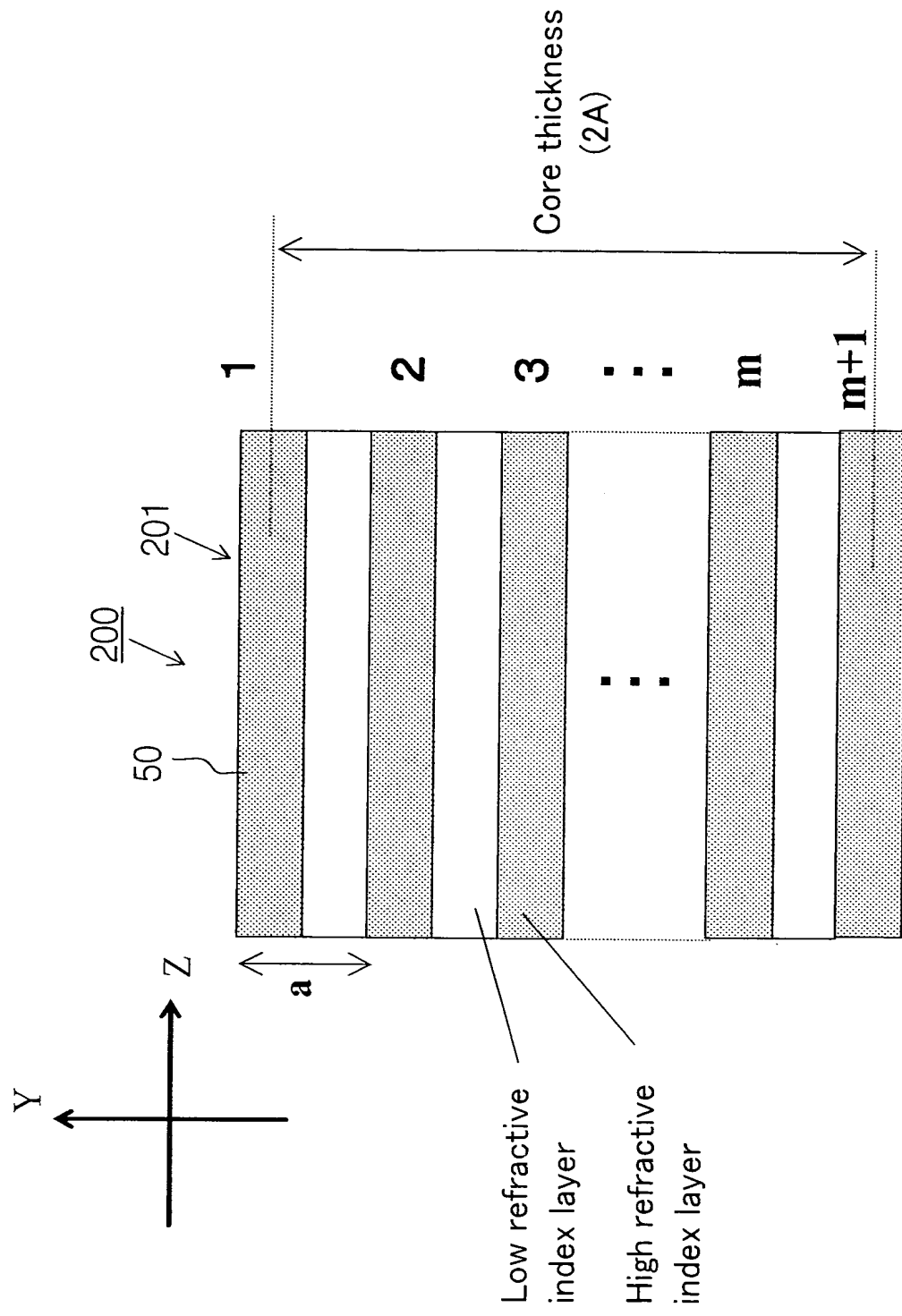


Fig. 25

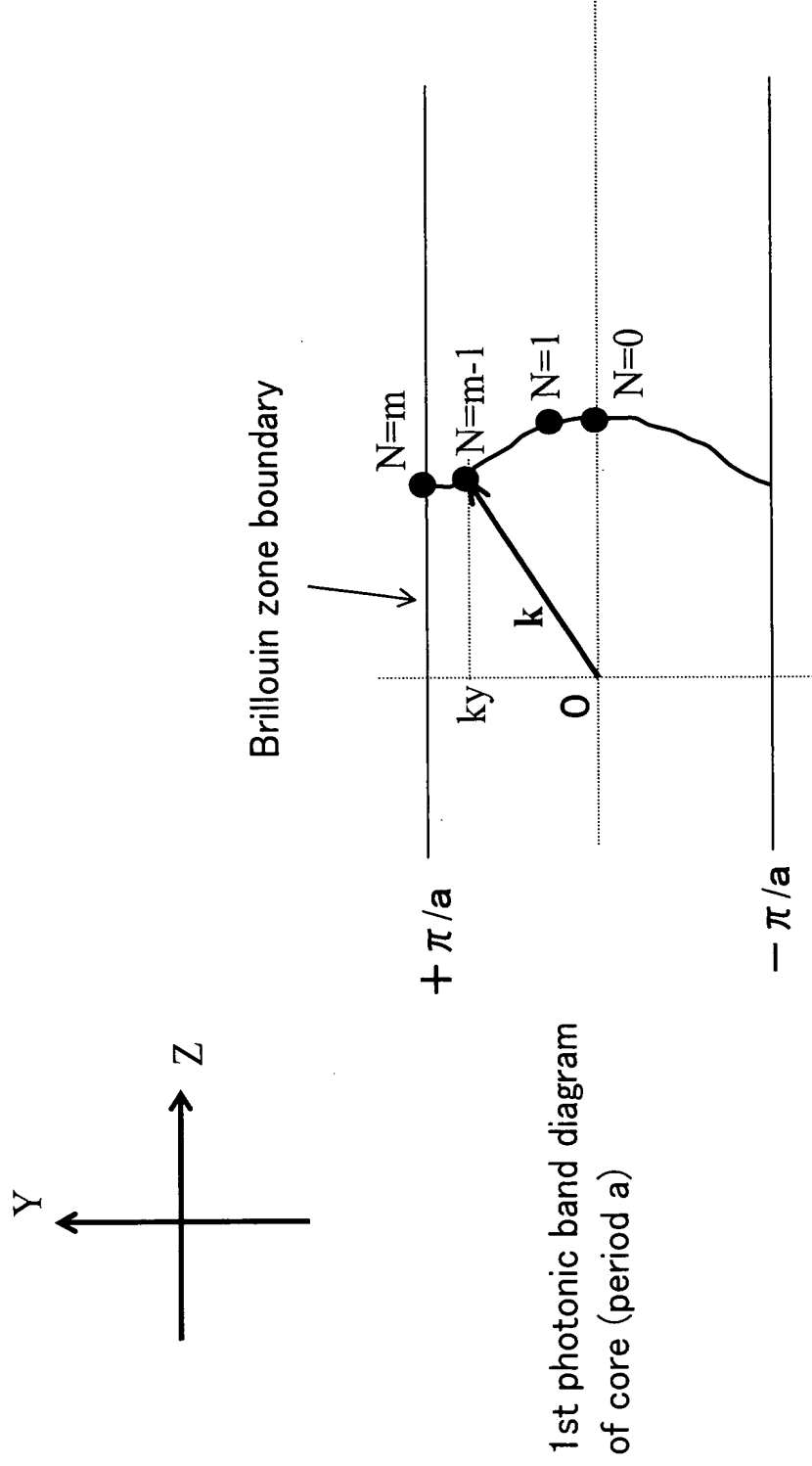


Fig. 26

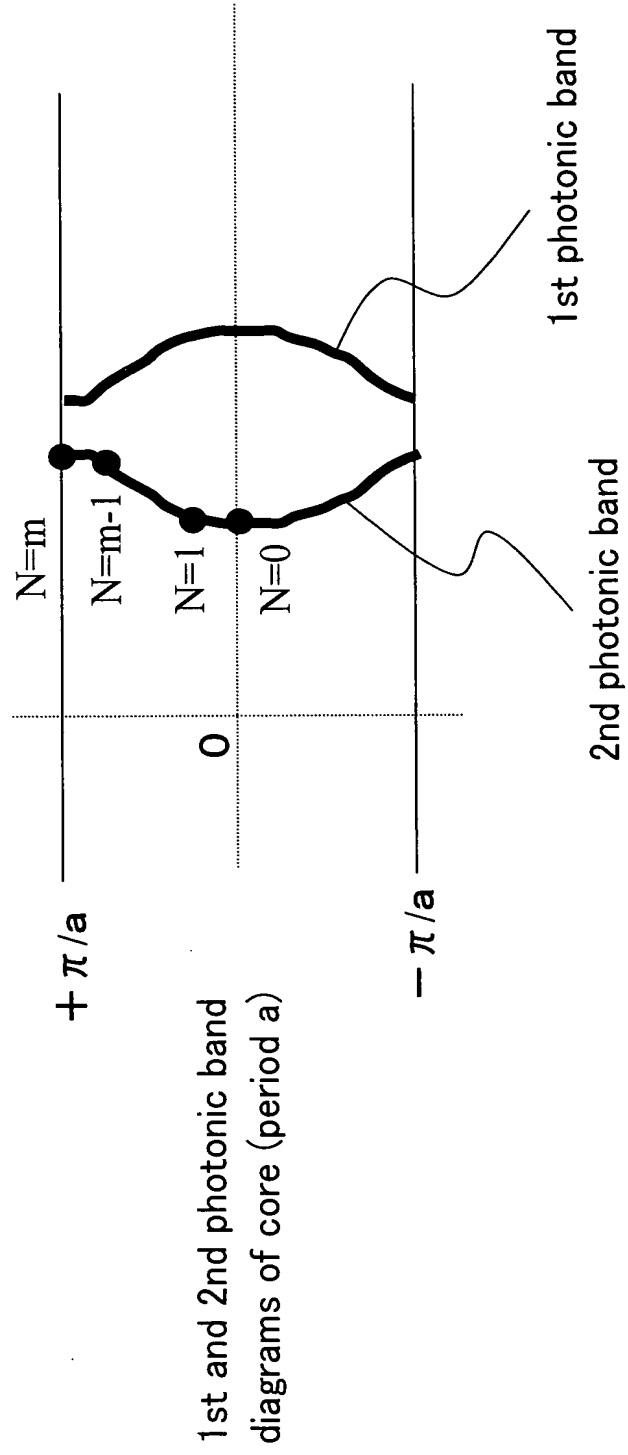


Fig. 27

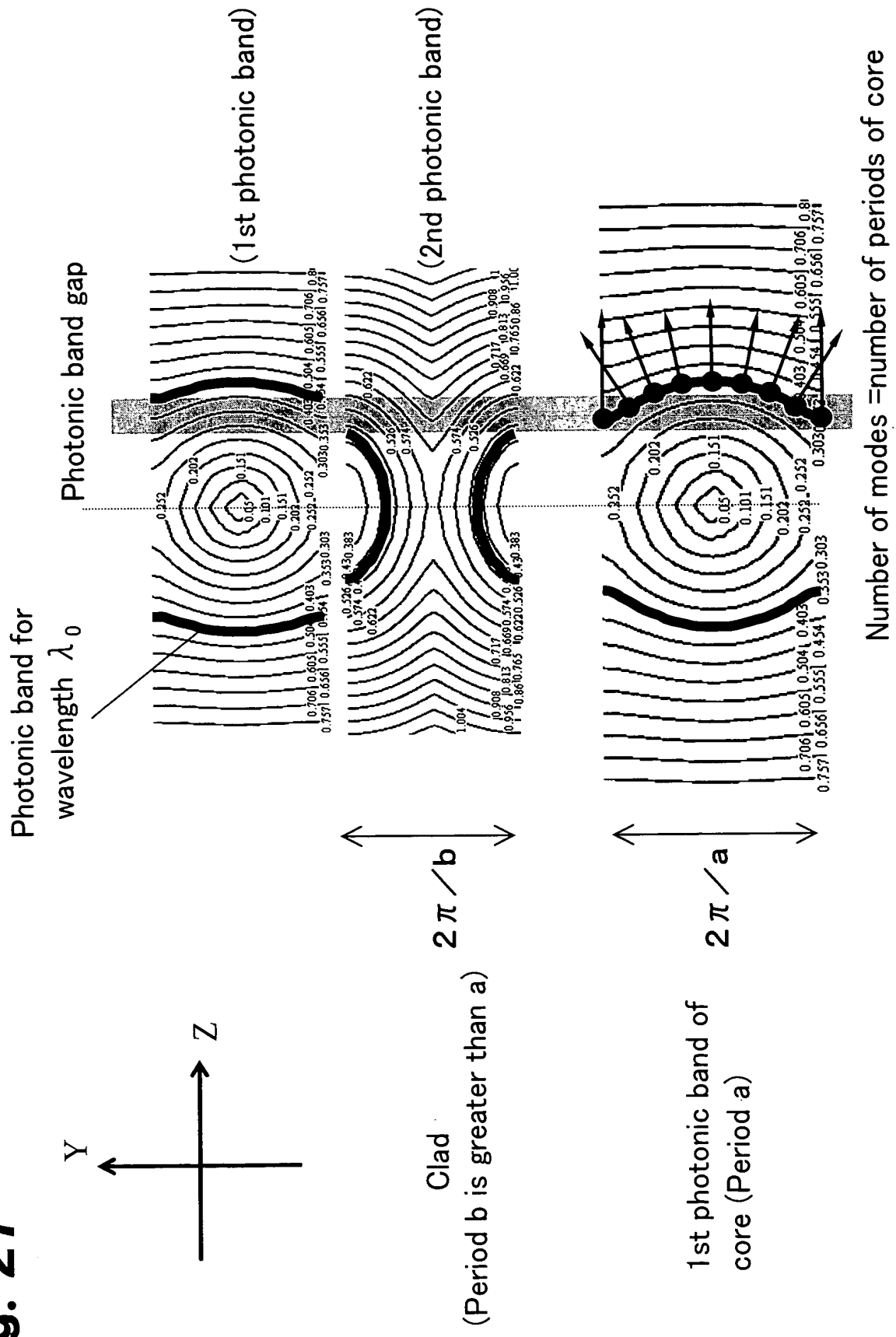


Fig. 28

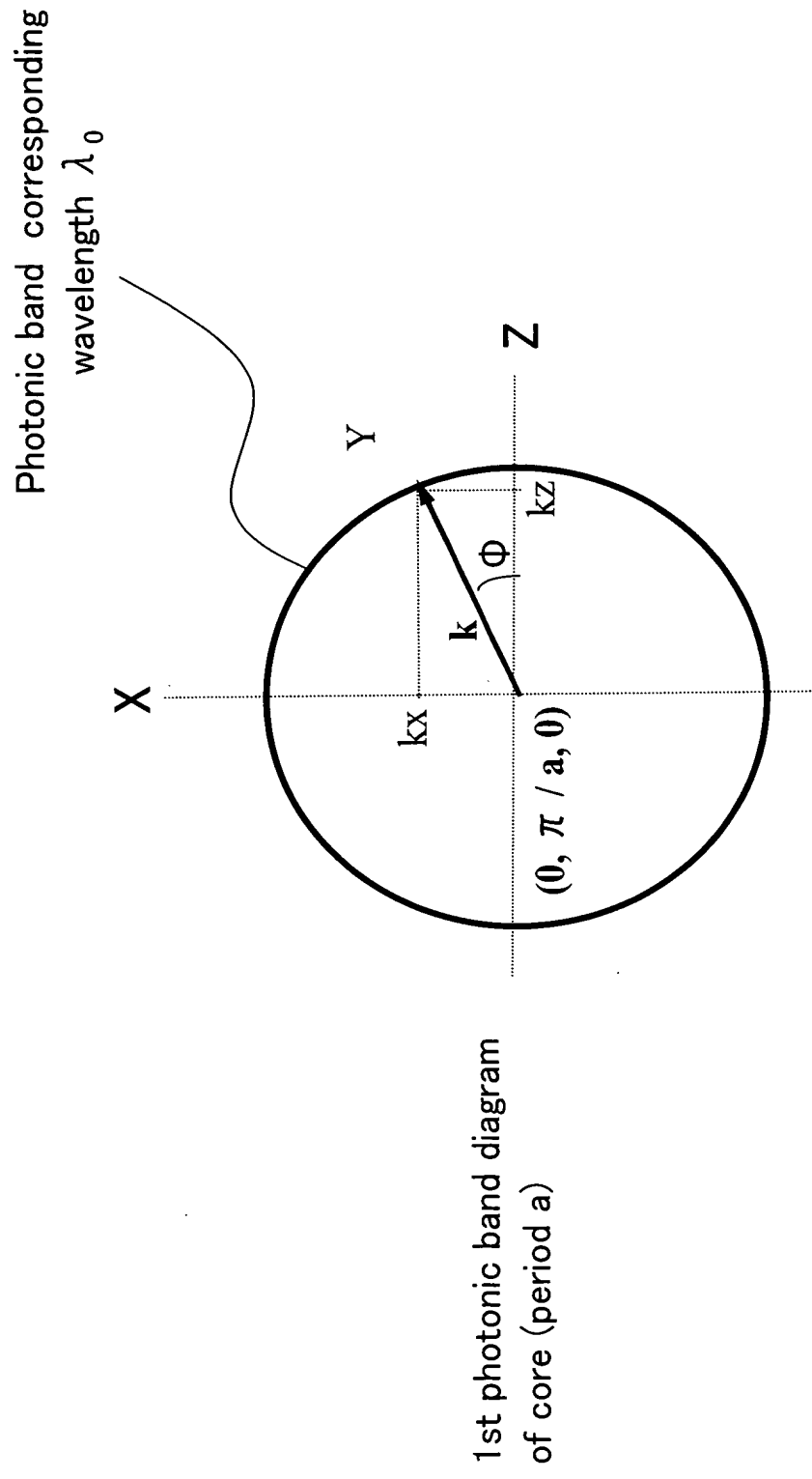


Fig. 29

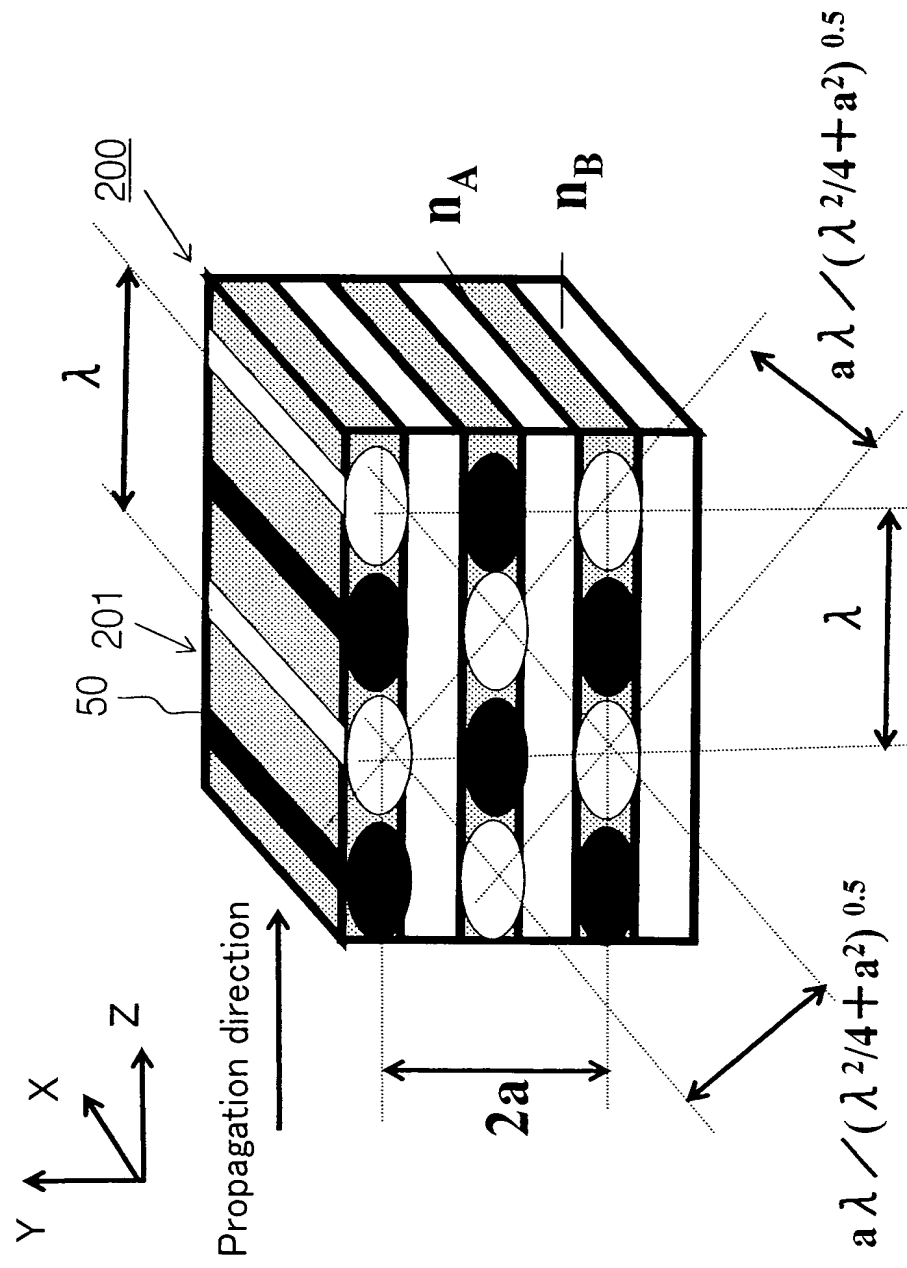


Fig. 30

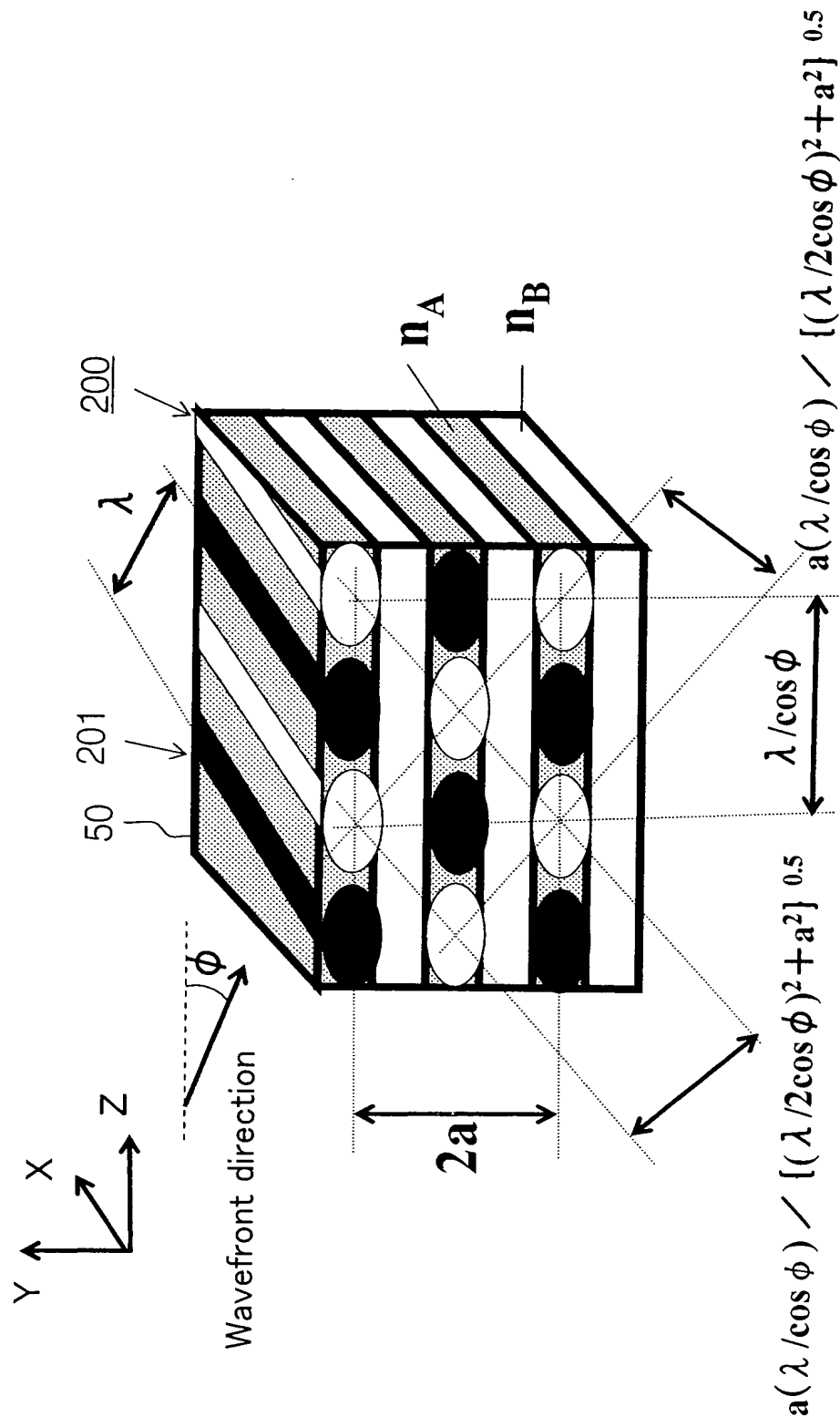


Fig. 31

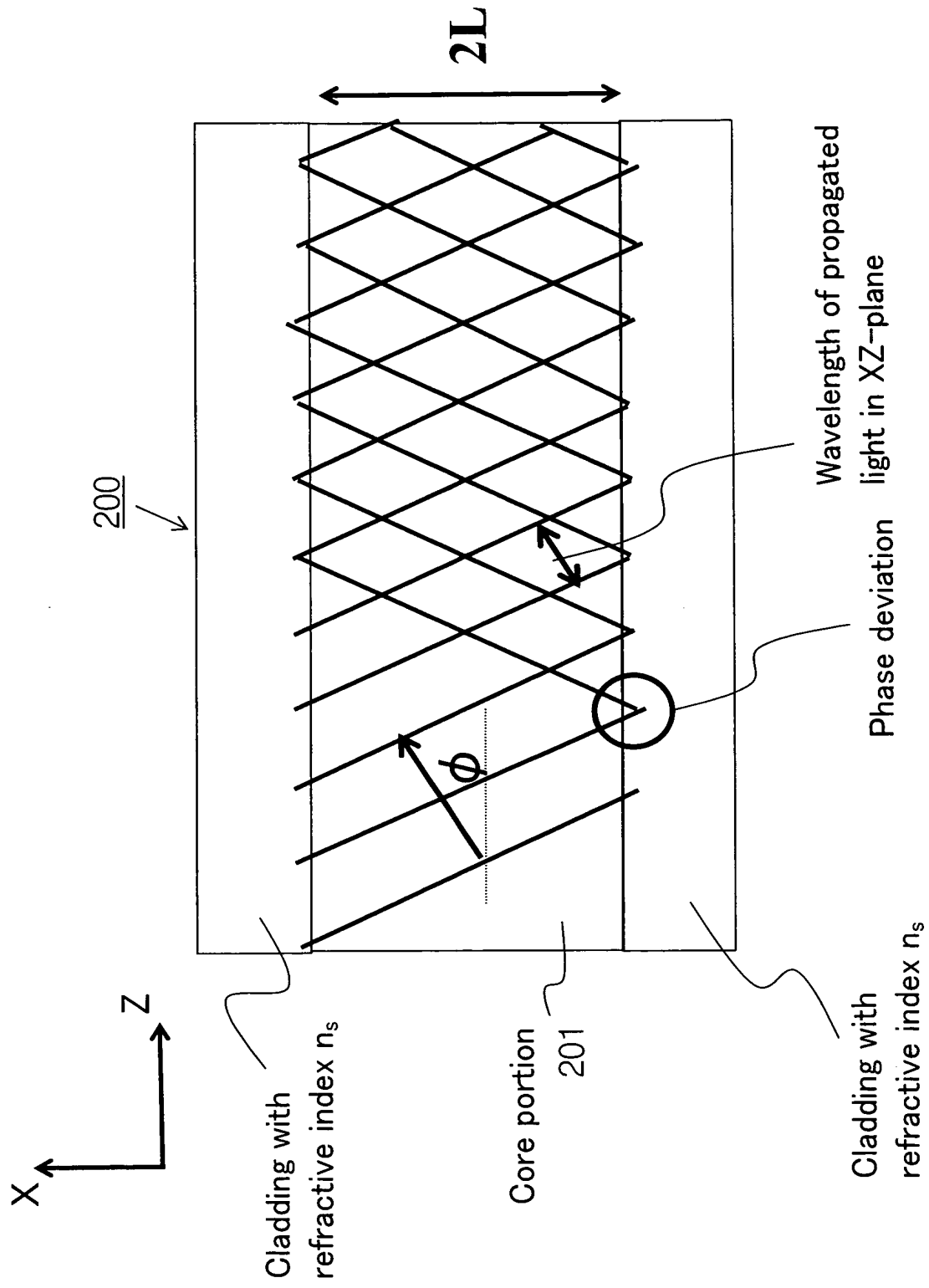


Fig. 32

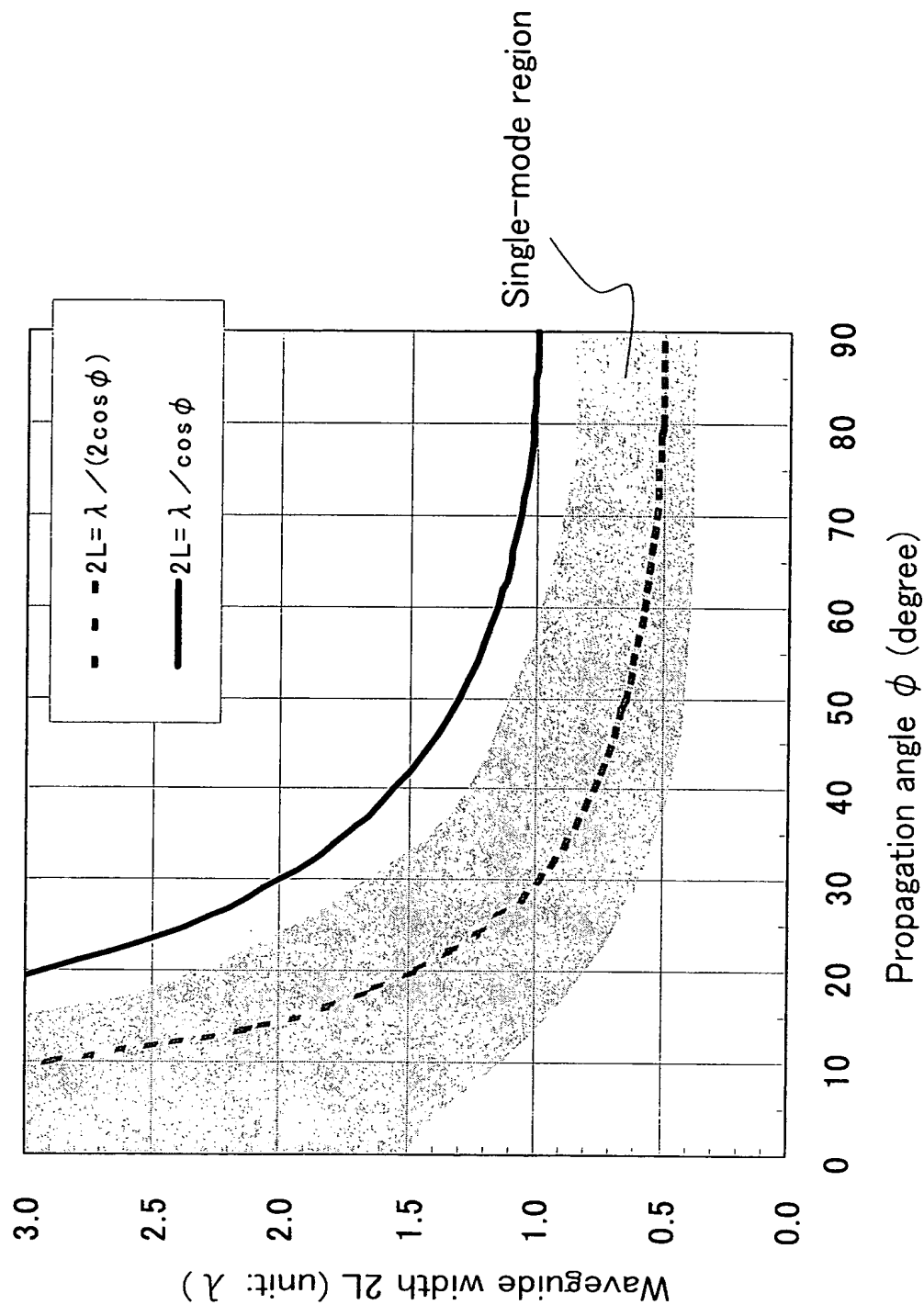


Fig. 33

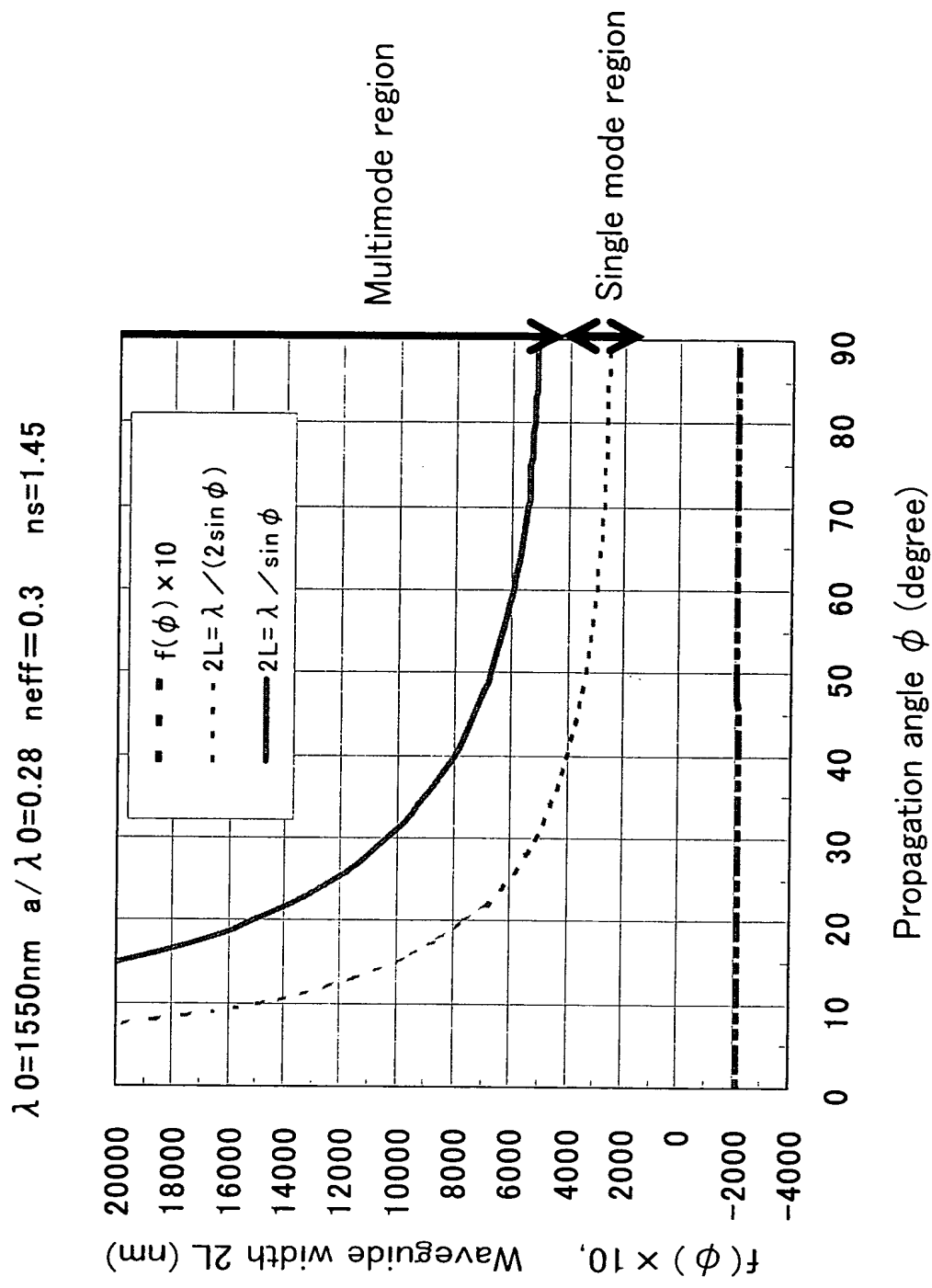


Fig. 34

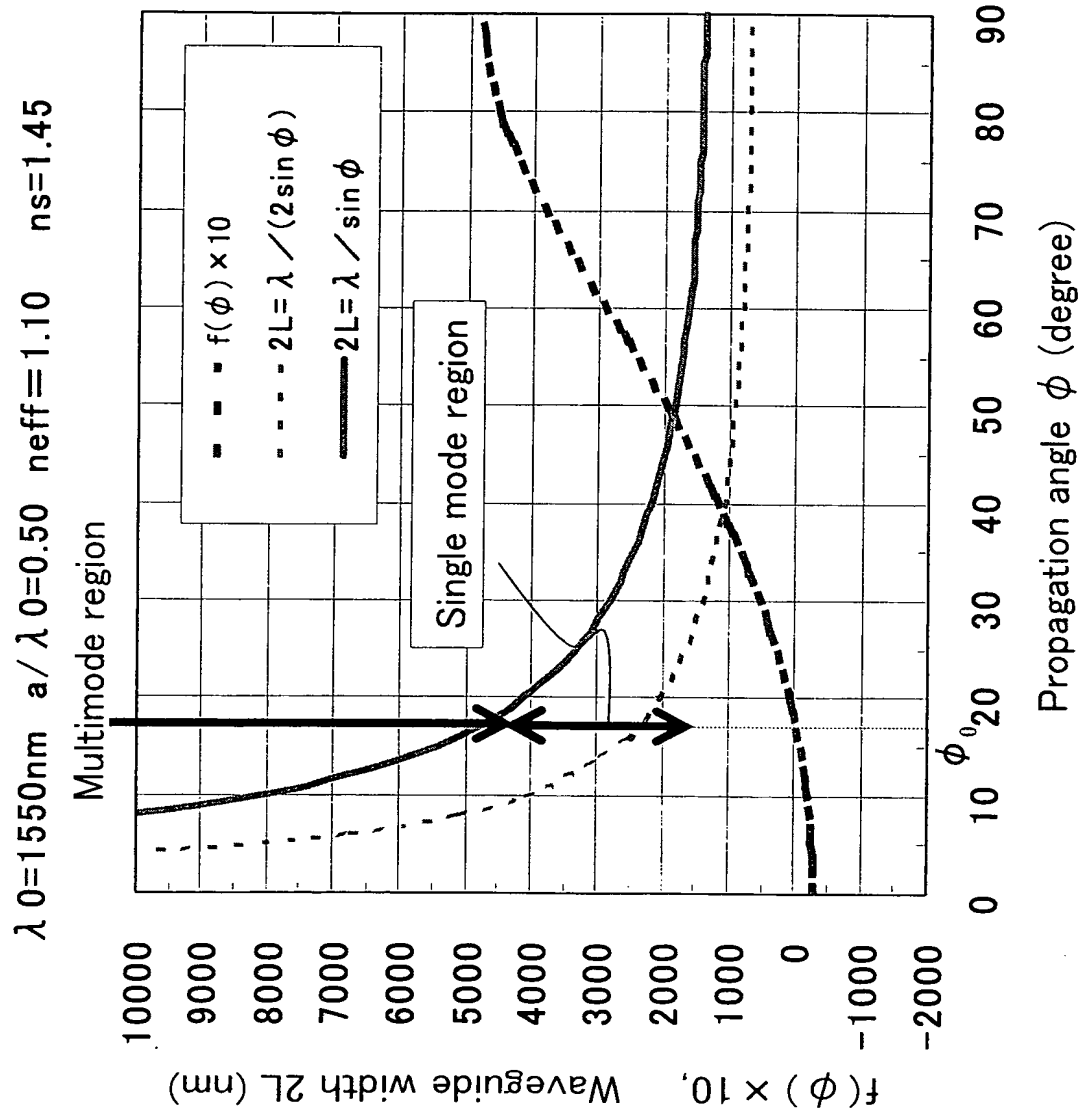


Fig. 35

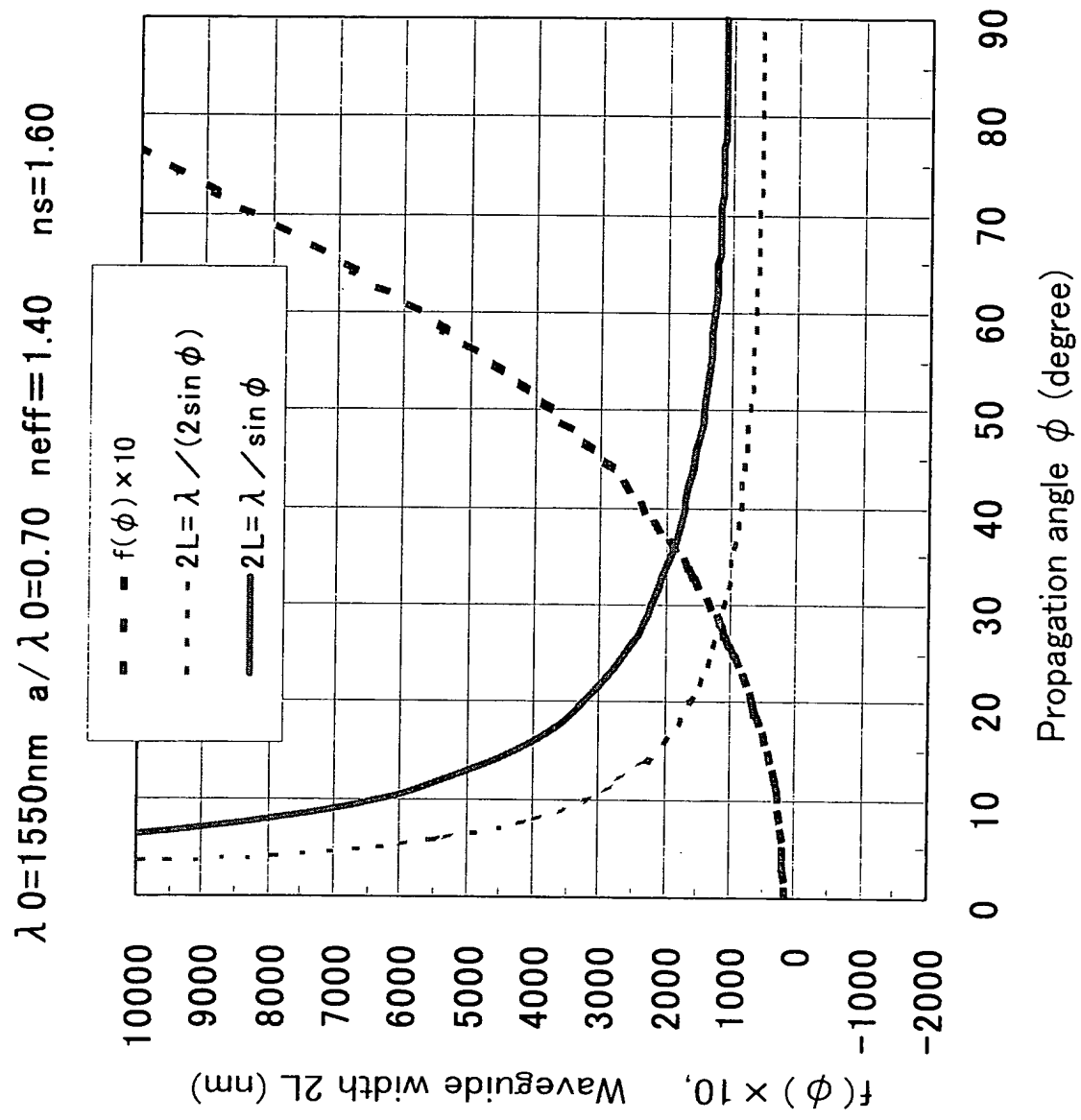


Fig. 37

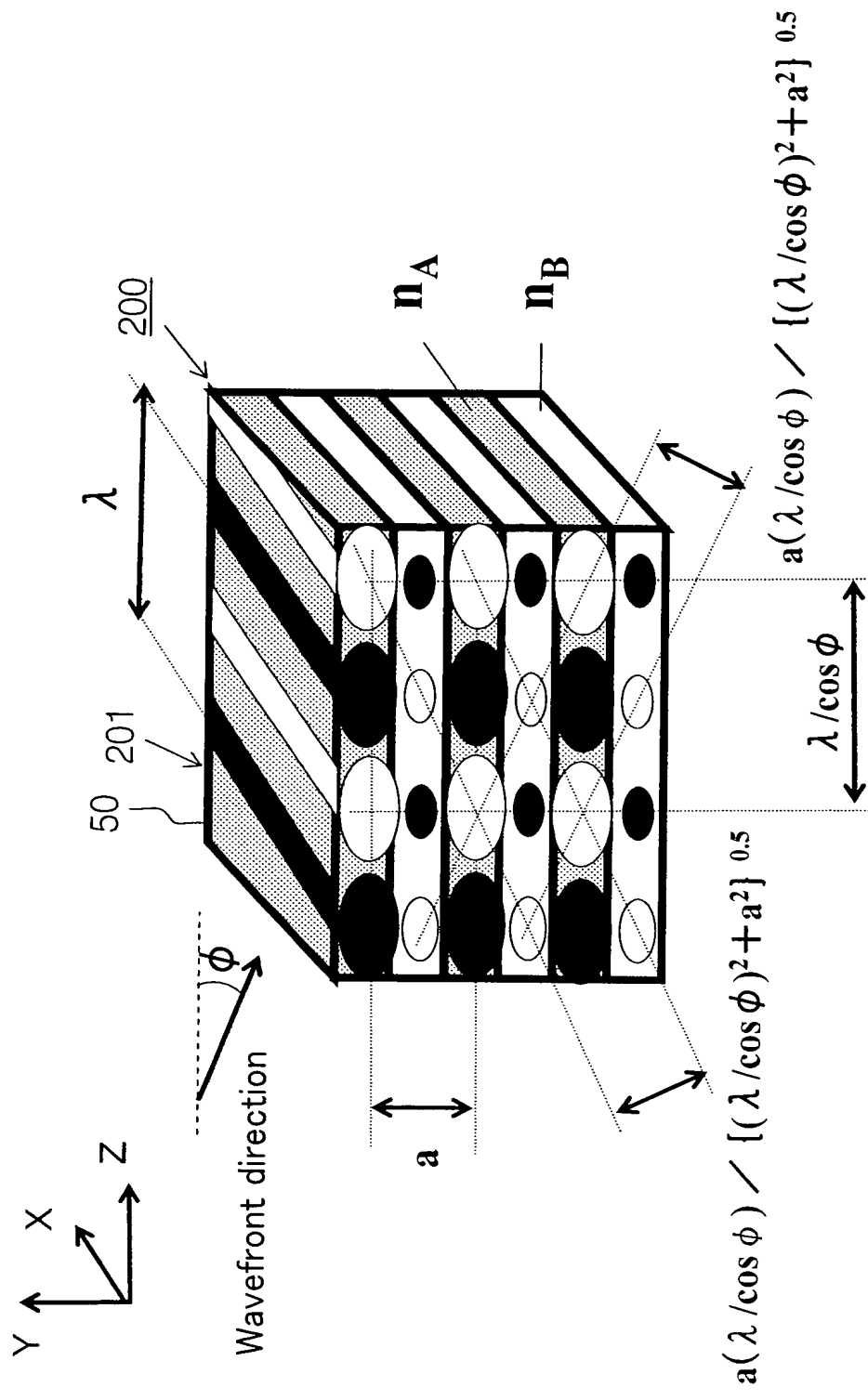


Fig. 38

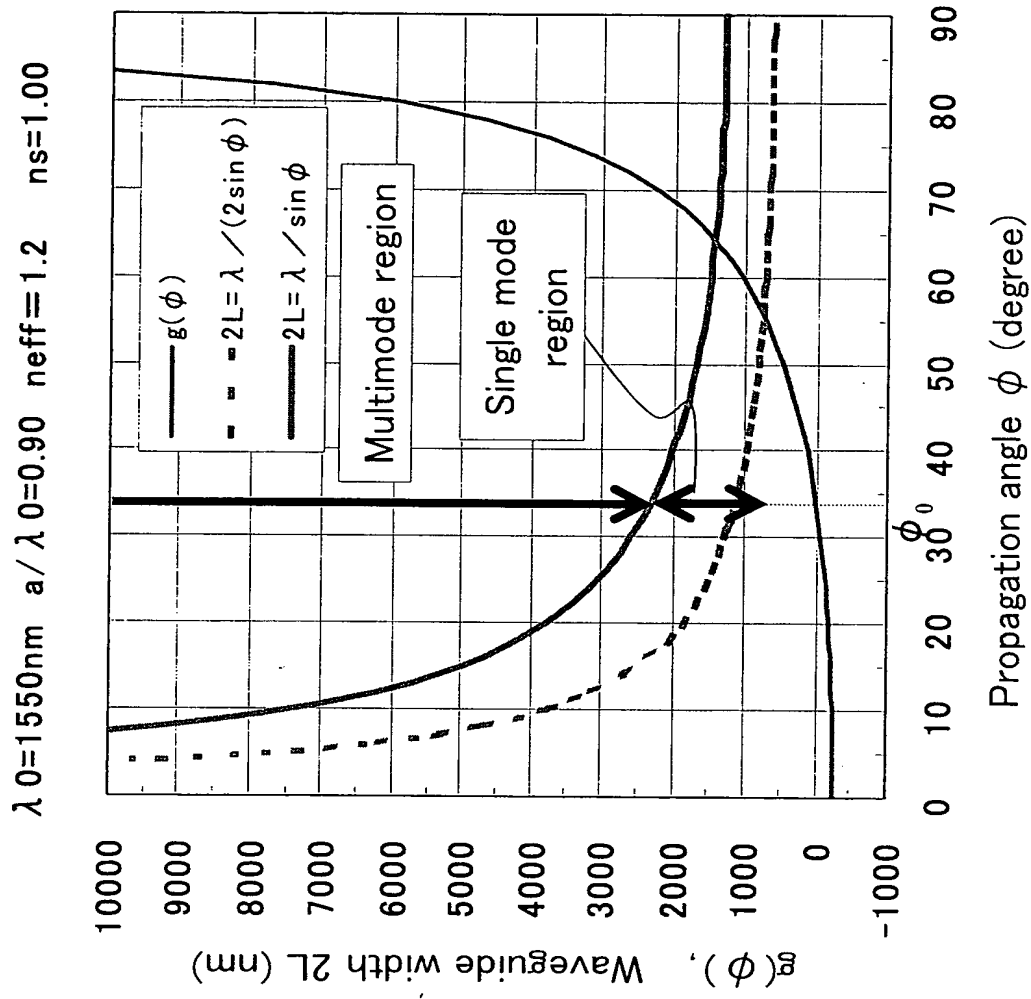


Fig. 39

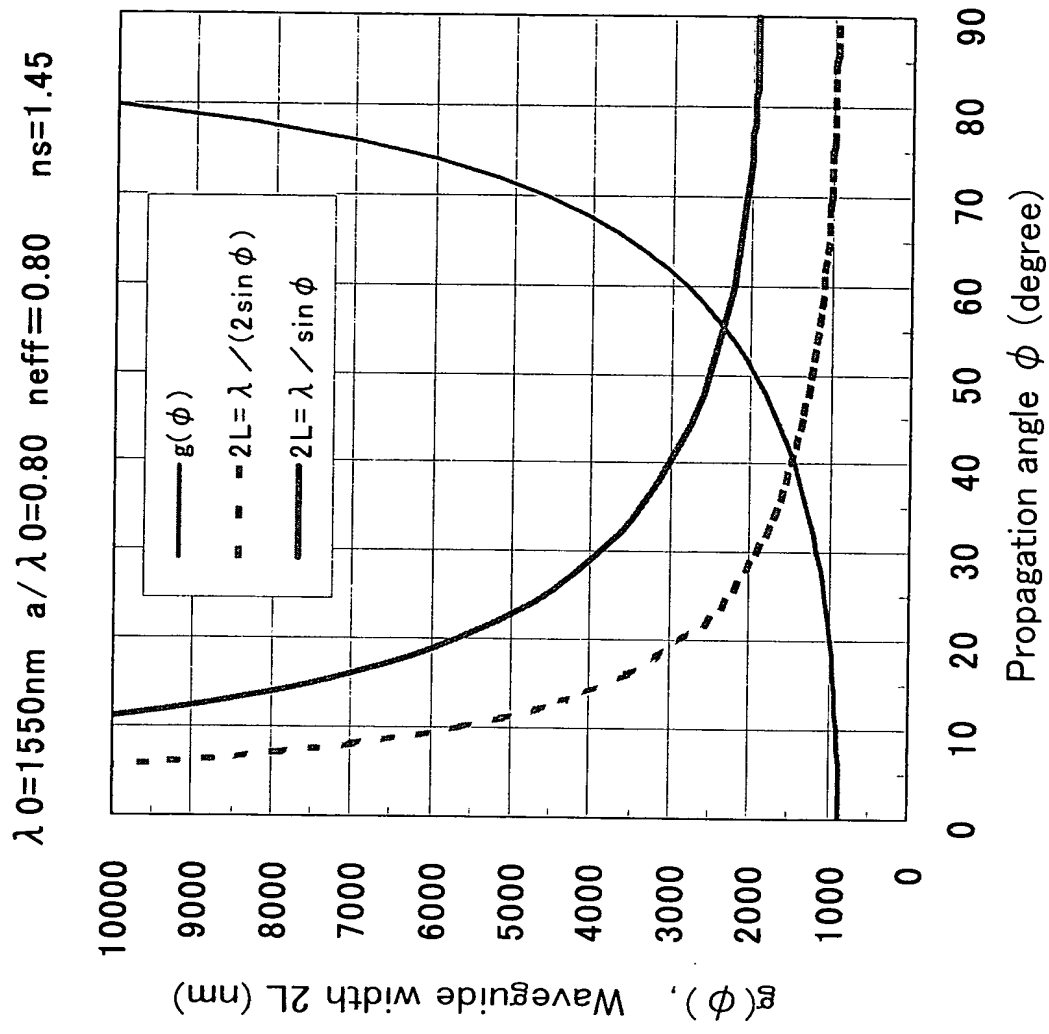


Fig. 40

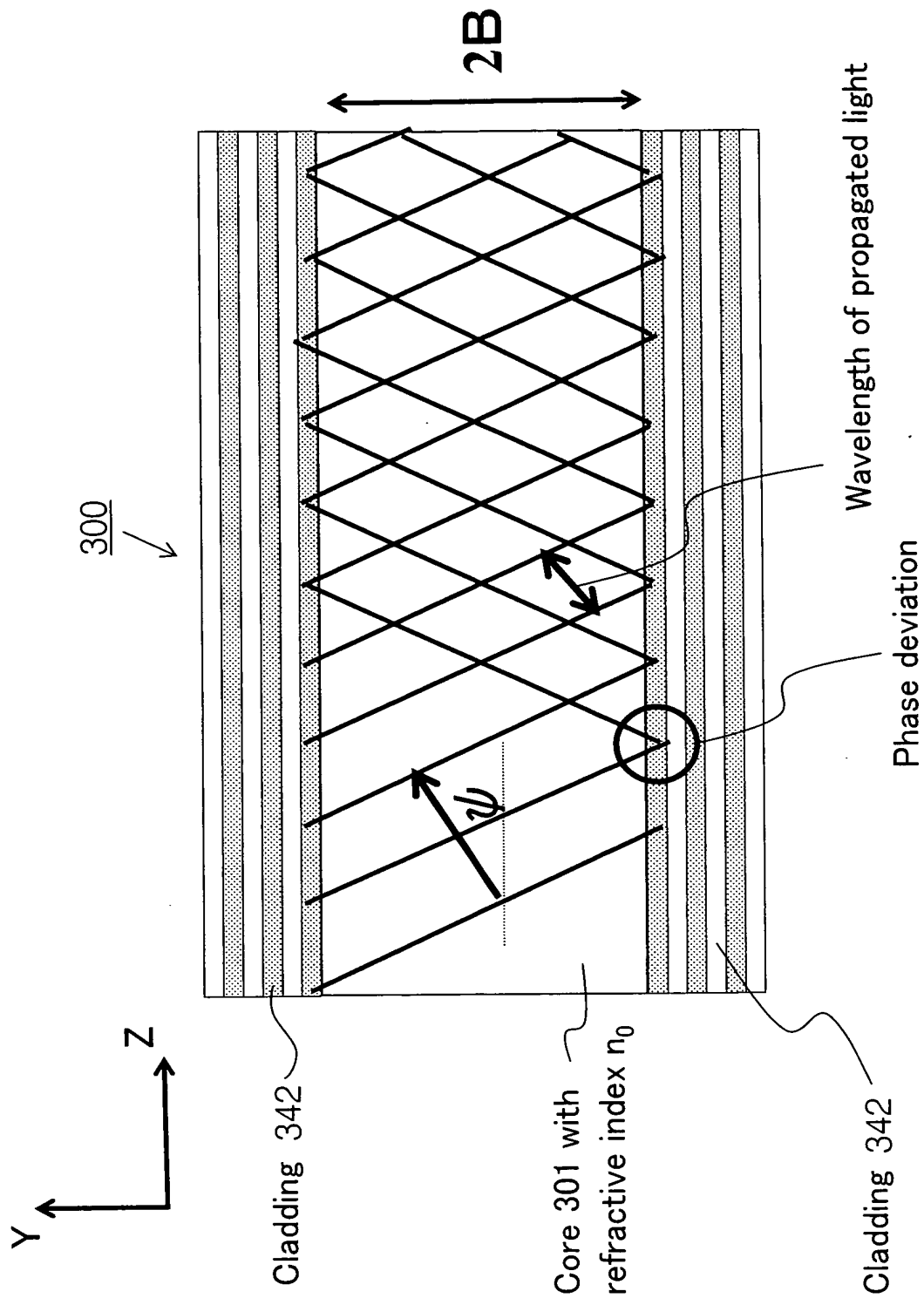


Fig. 41

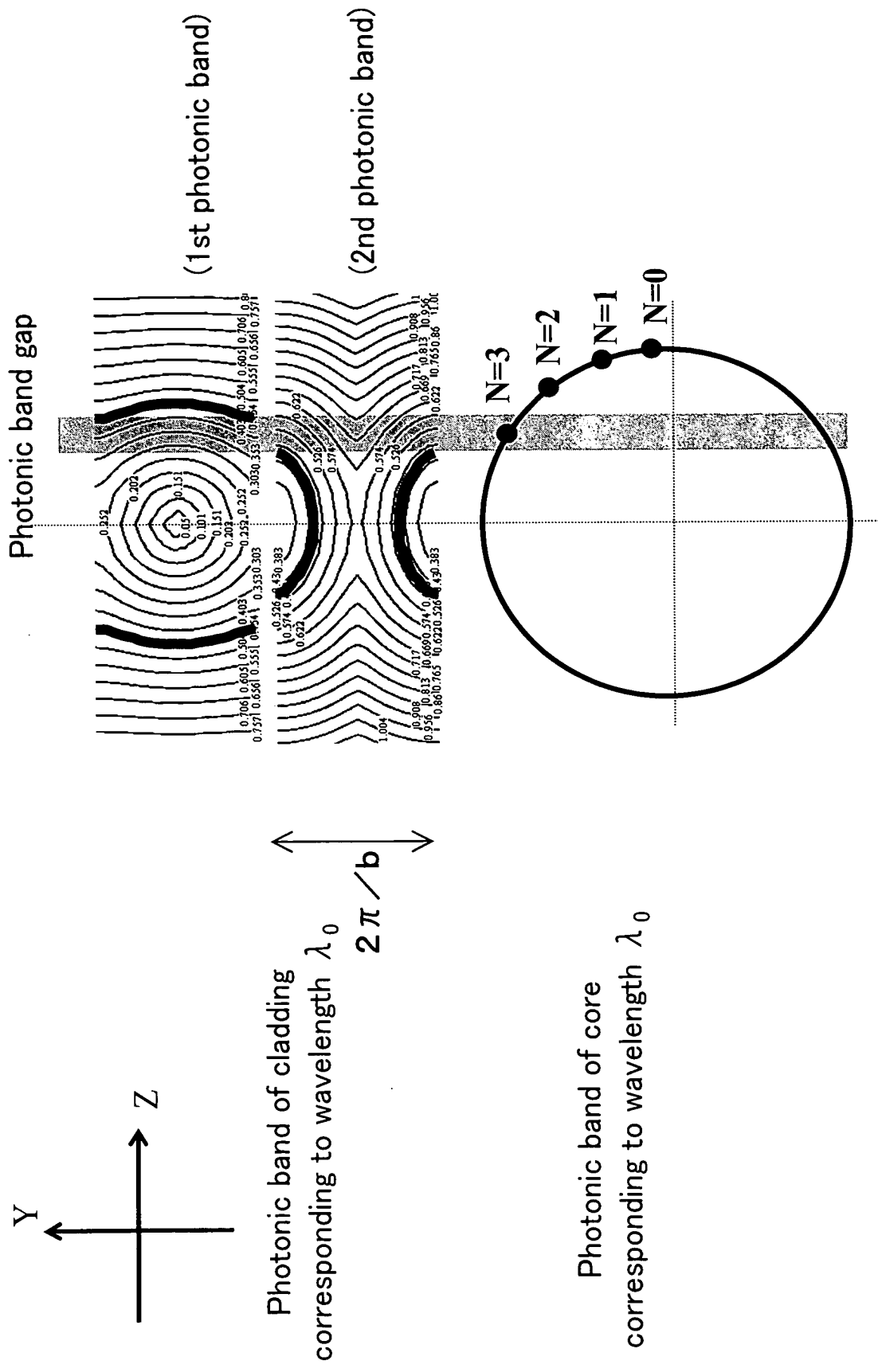


Fig. 43

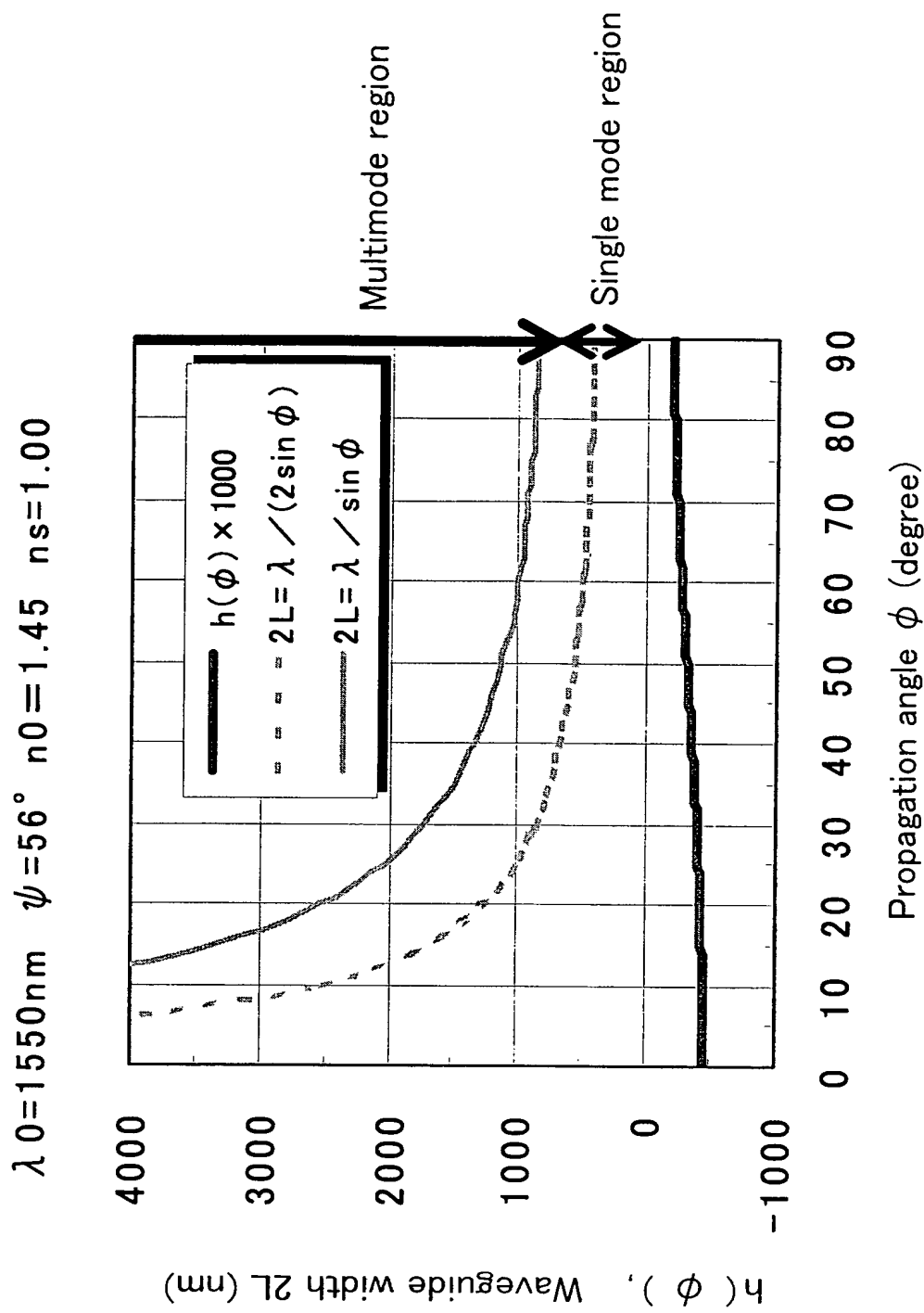


Fig. 44

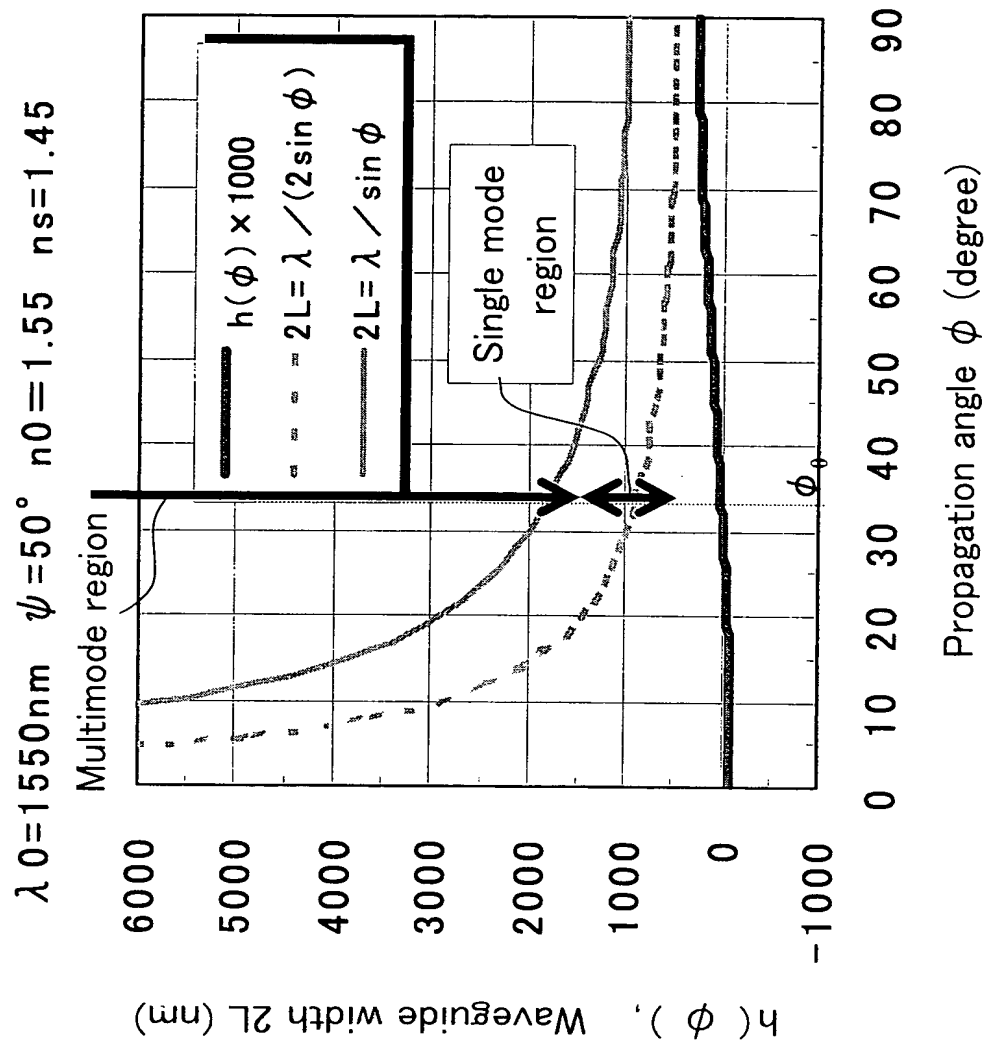


Fig. 45

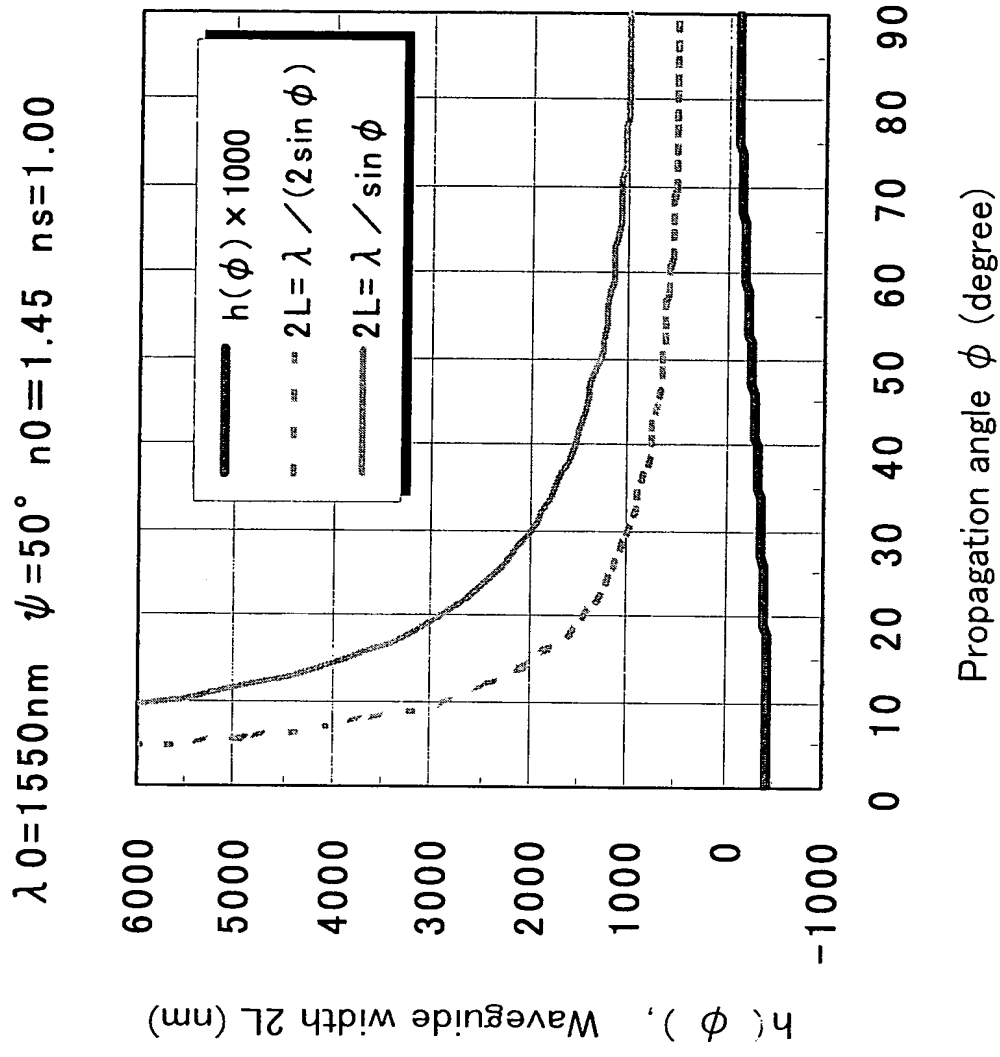


Fig.46

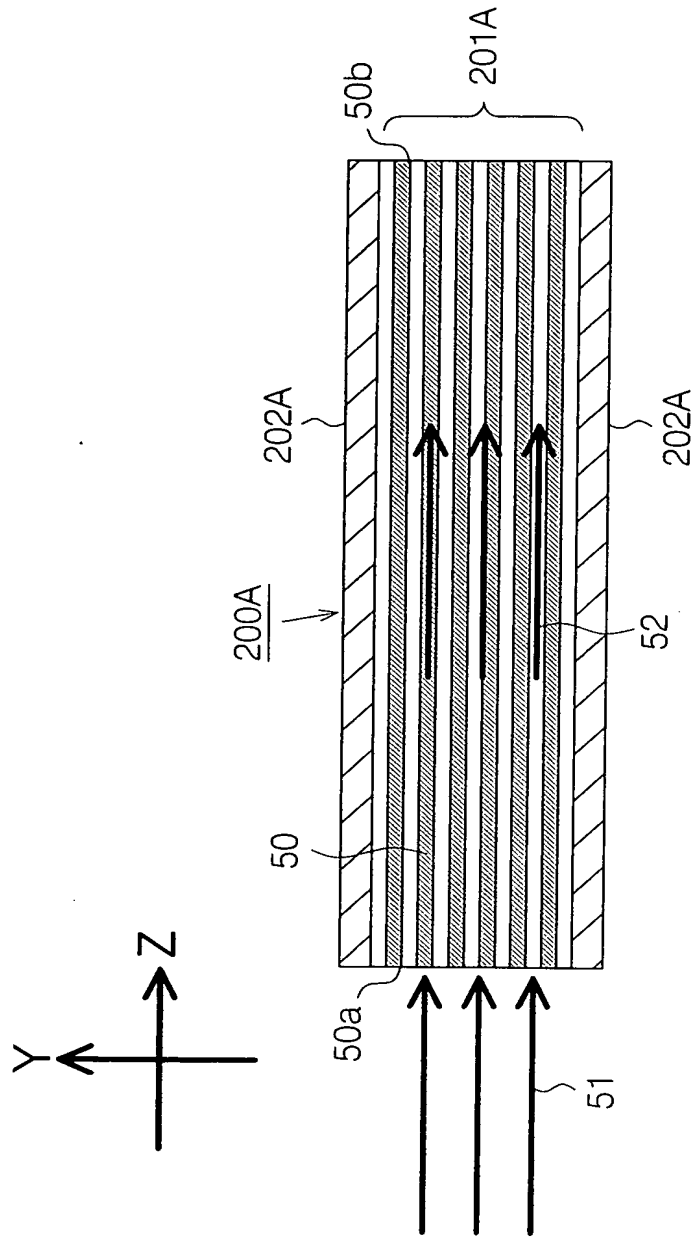


Fig.47

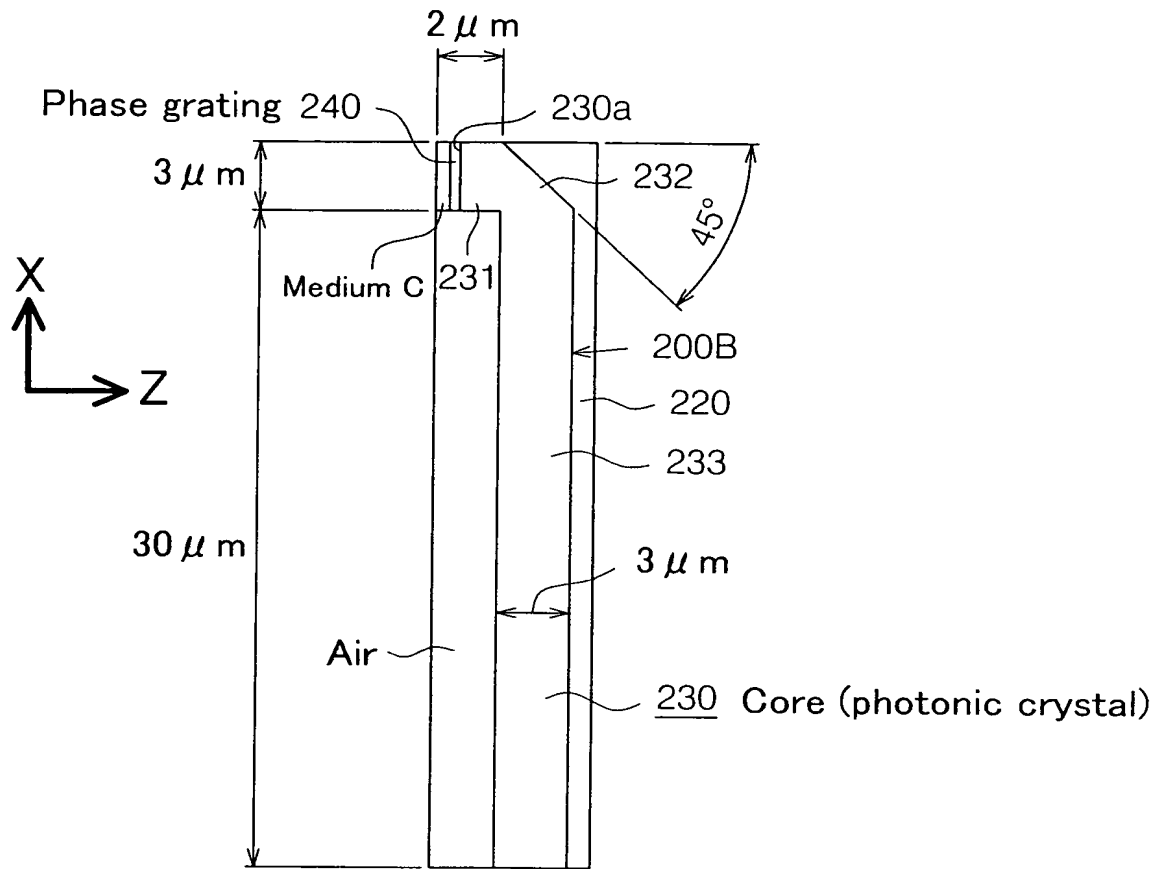


Fig.48

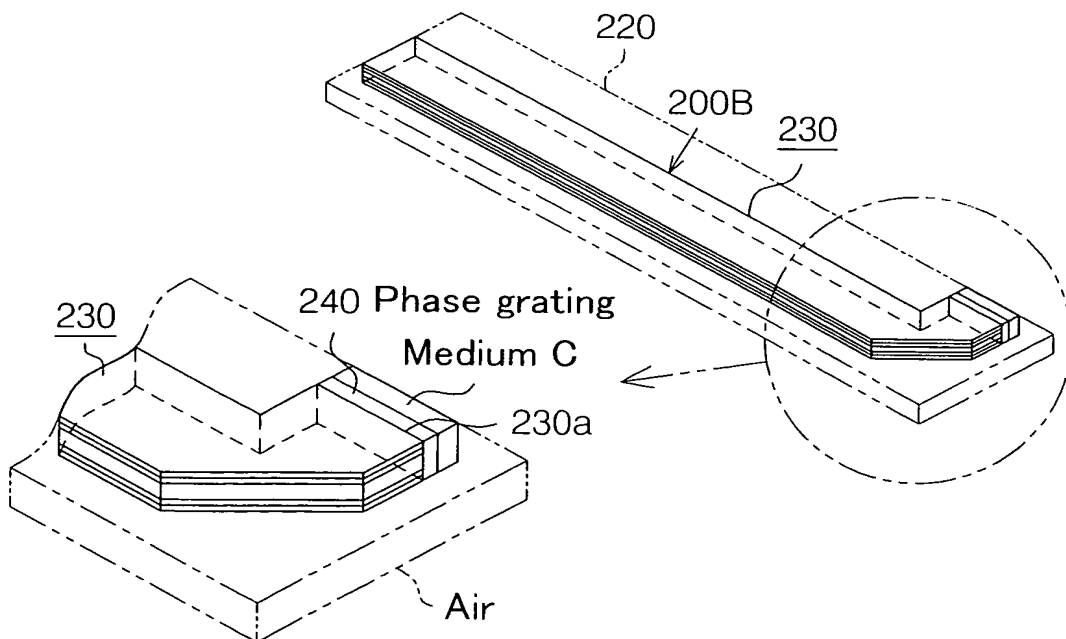


Fig.49

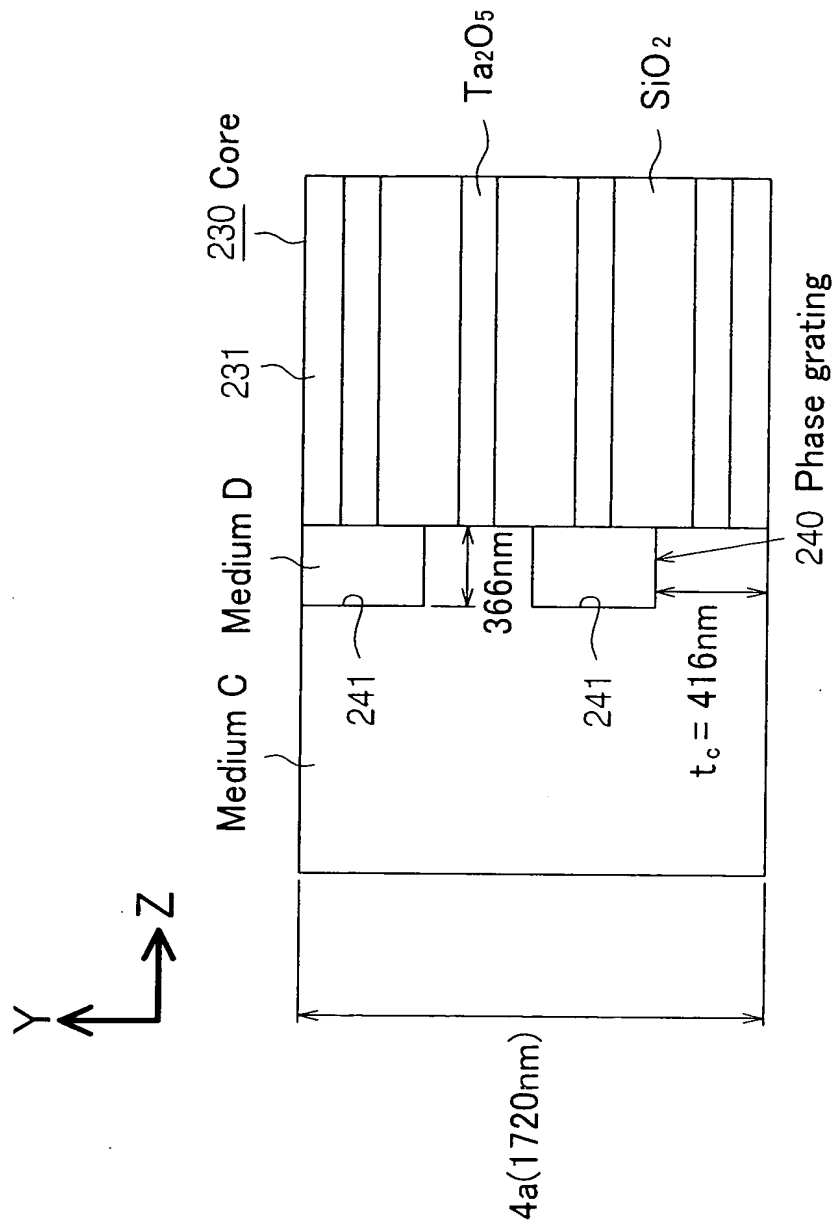


Fig. 50

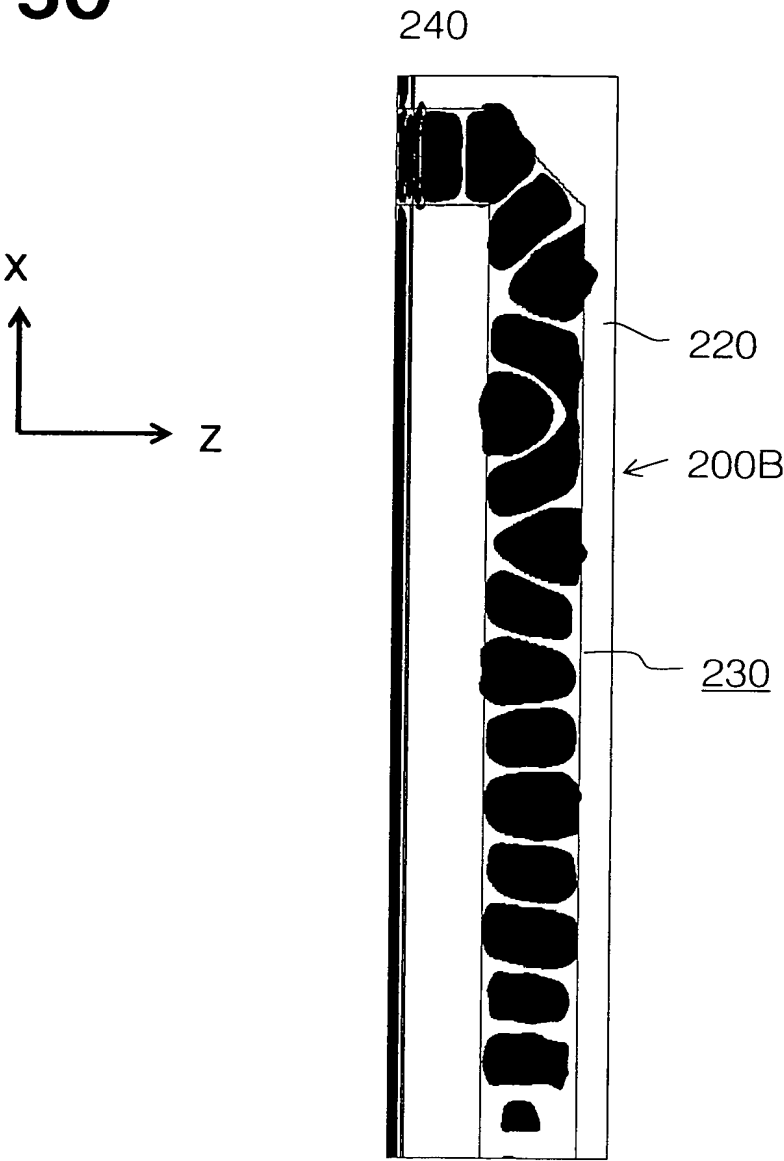


Fig.51

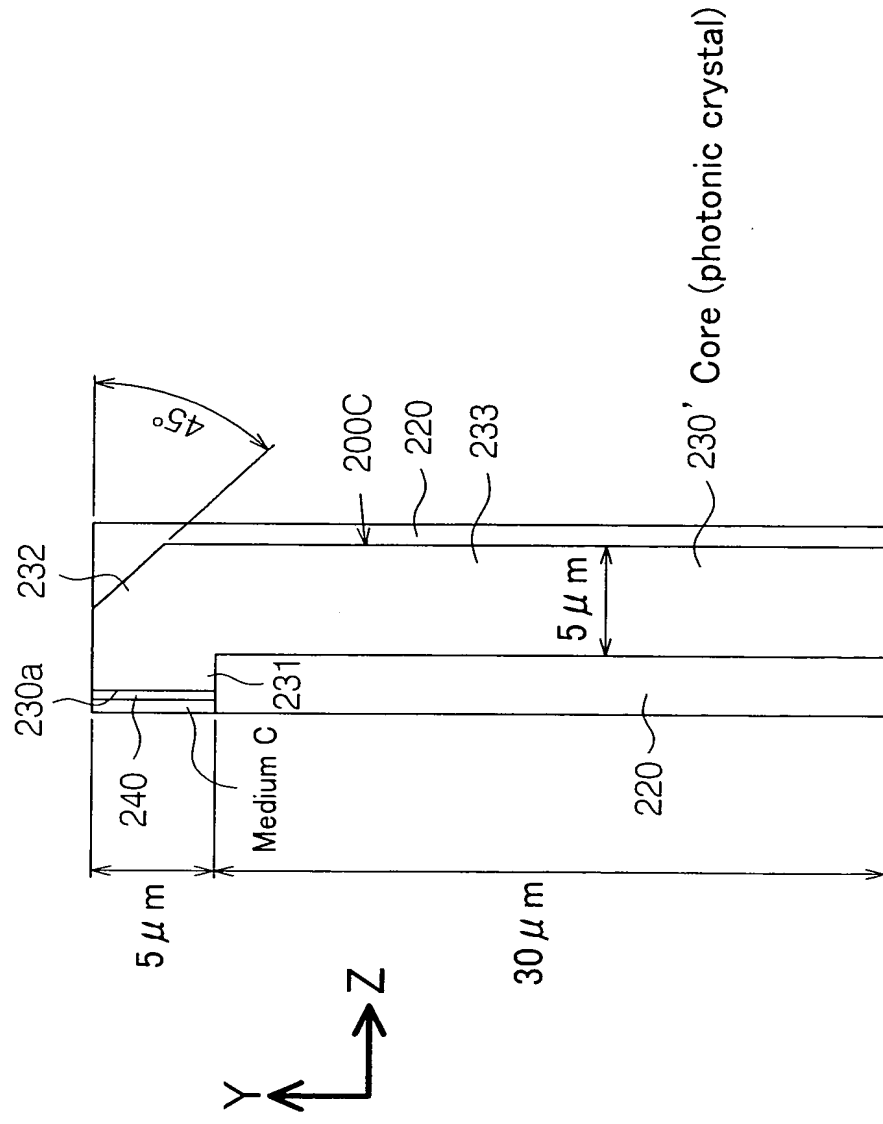


Fig. 52

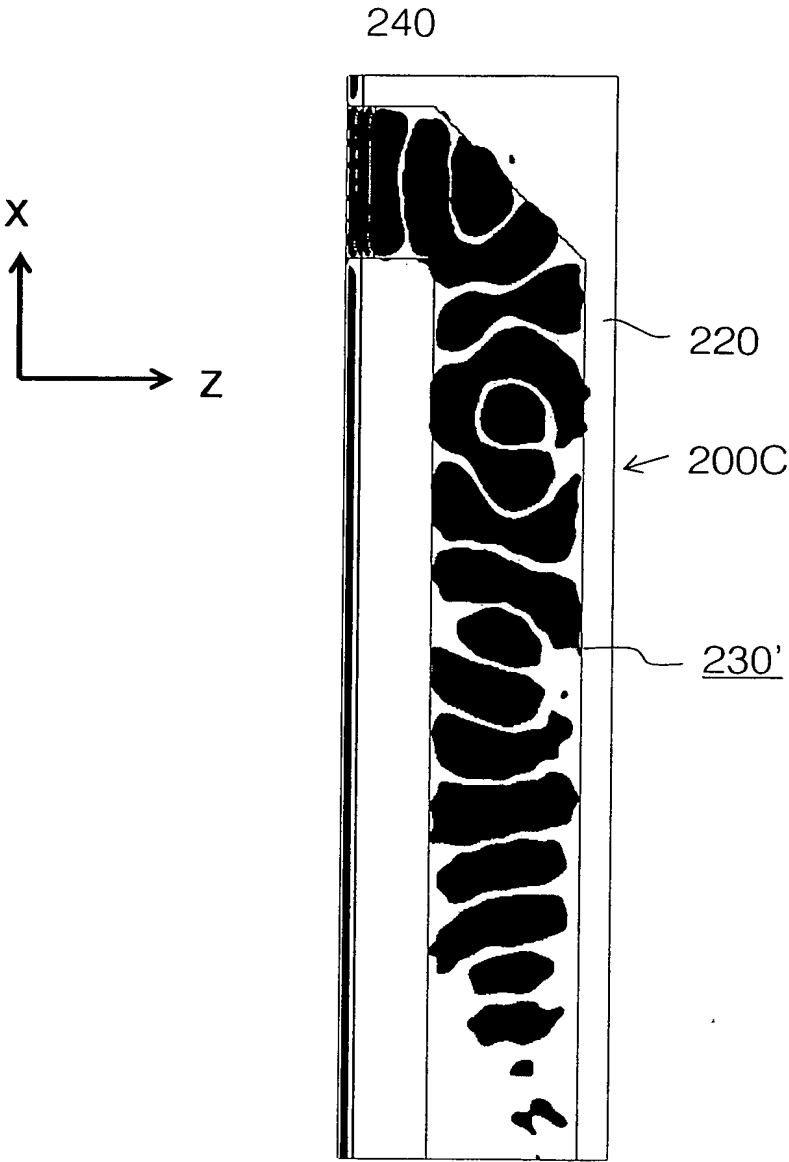


Fig.53

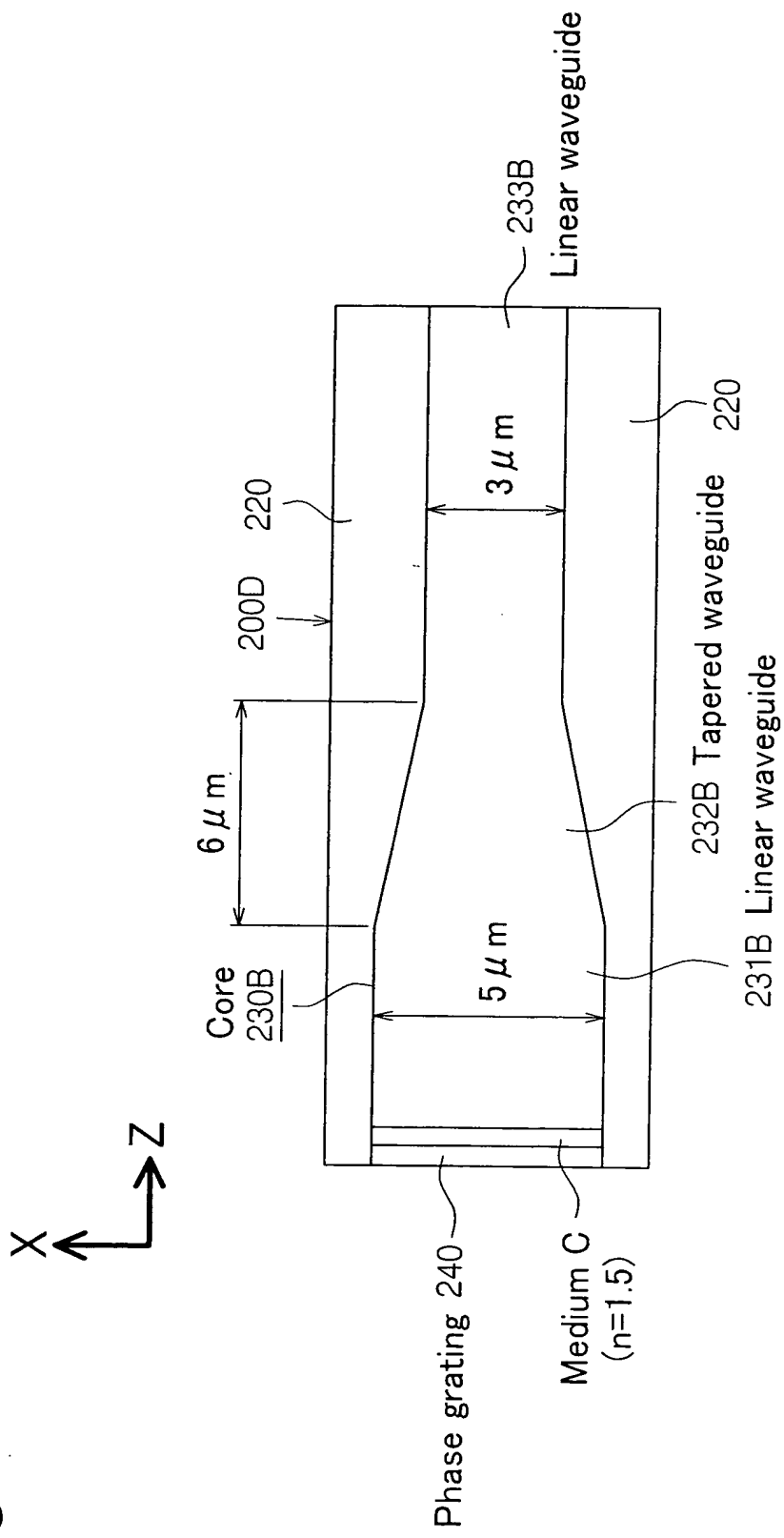


Fig. 54

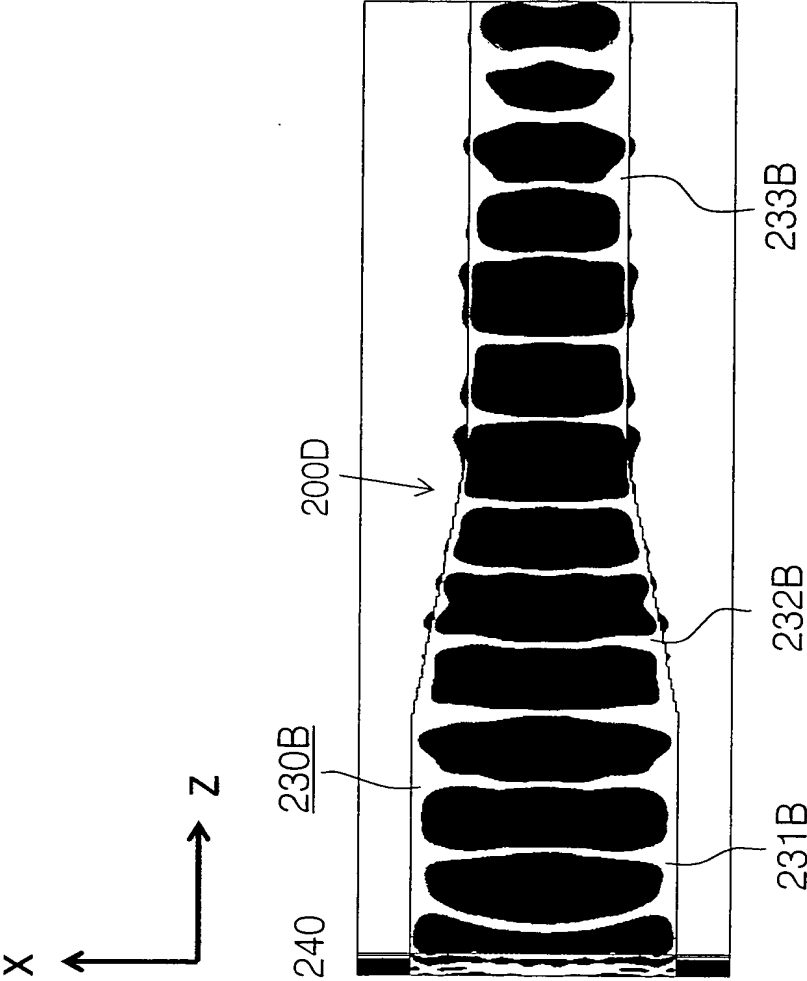


Fig.55

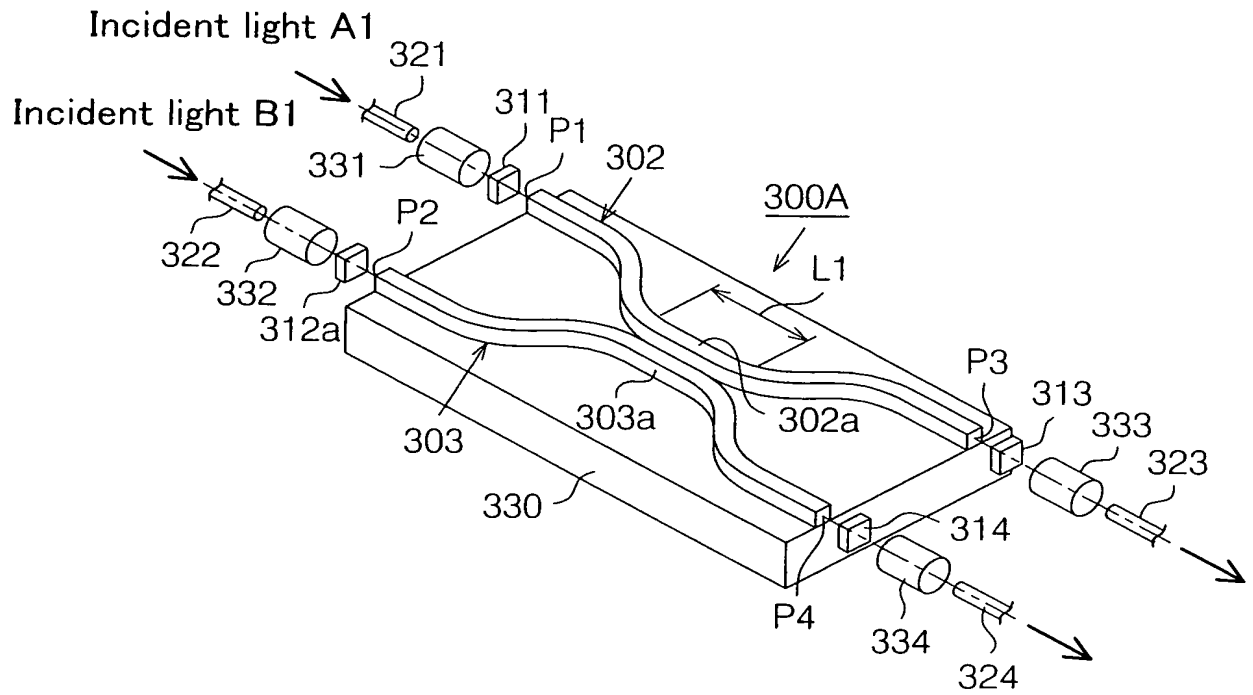


Fig.56

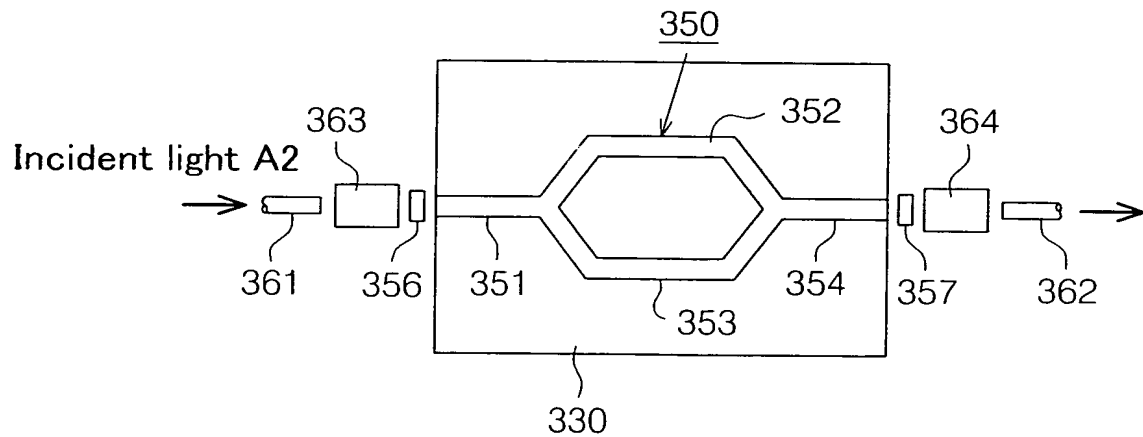


Fig.57

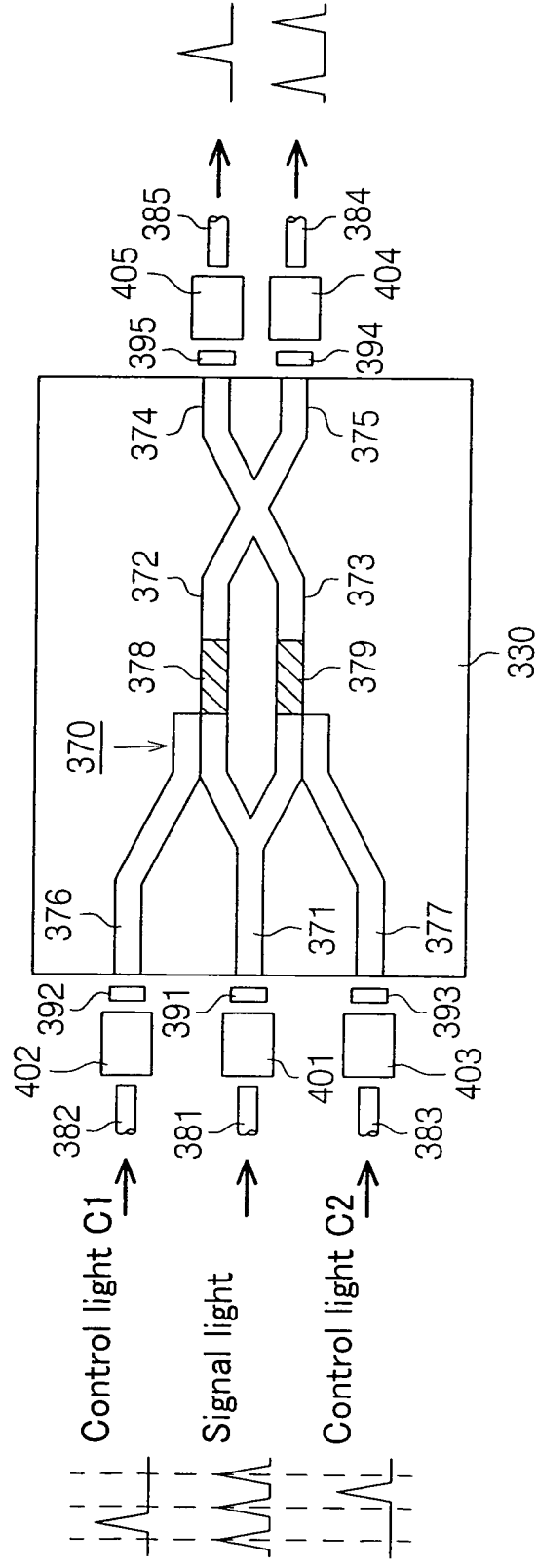
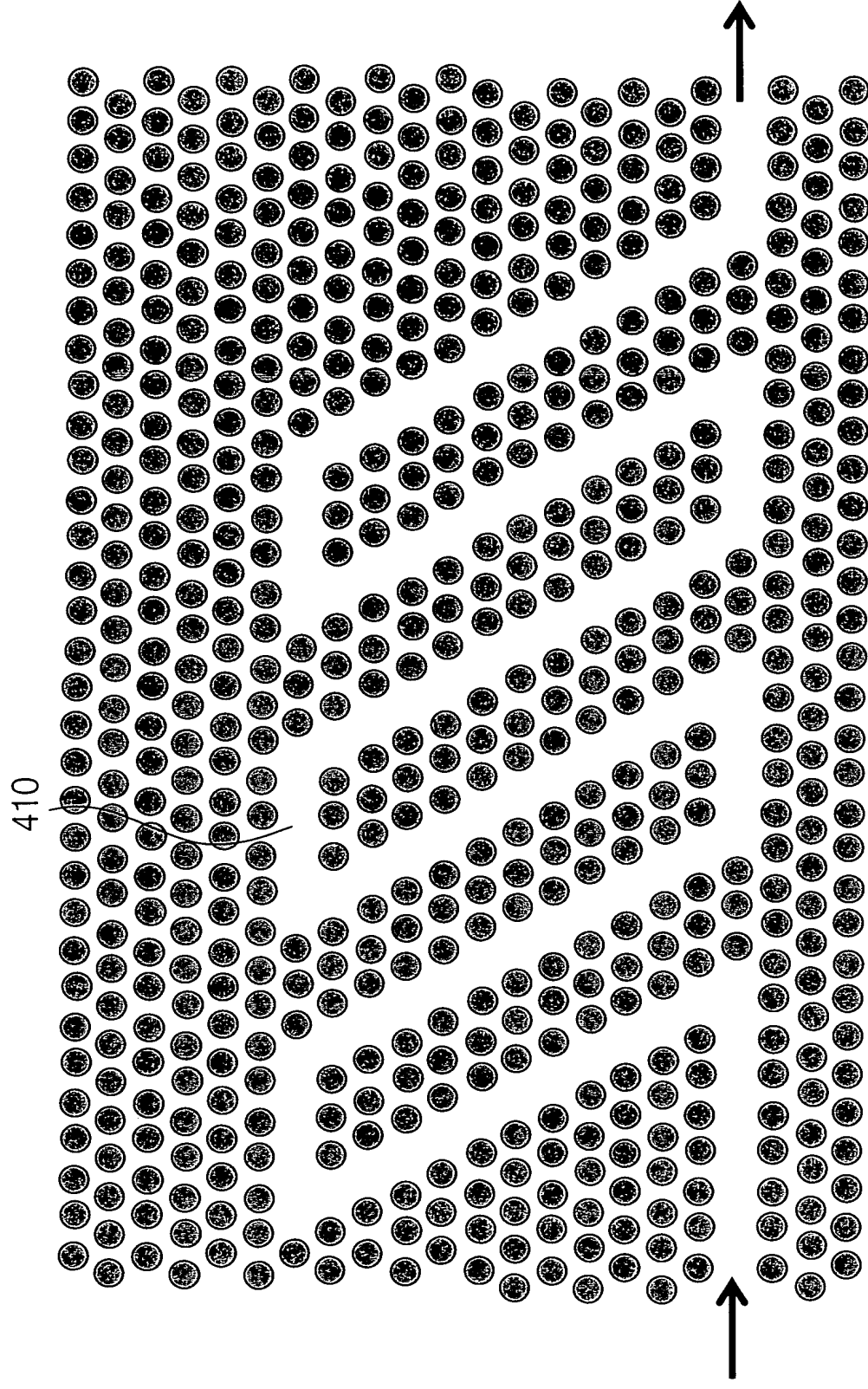


Fig. 58



Example of delay line by defect waveguide in two-dimensional photonic crystal

Fig. 59

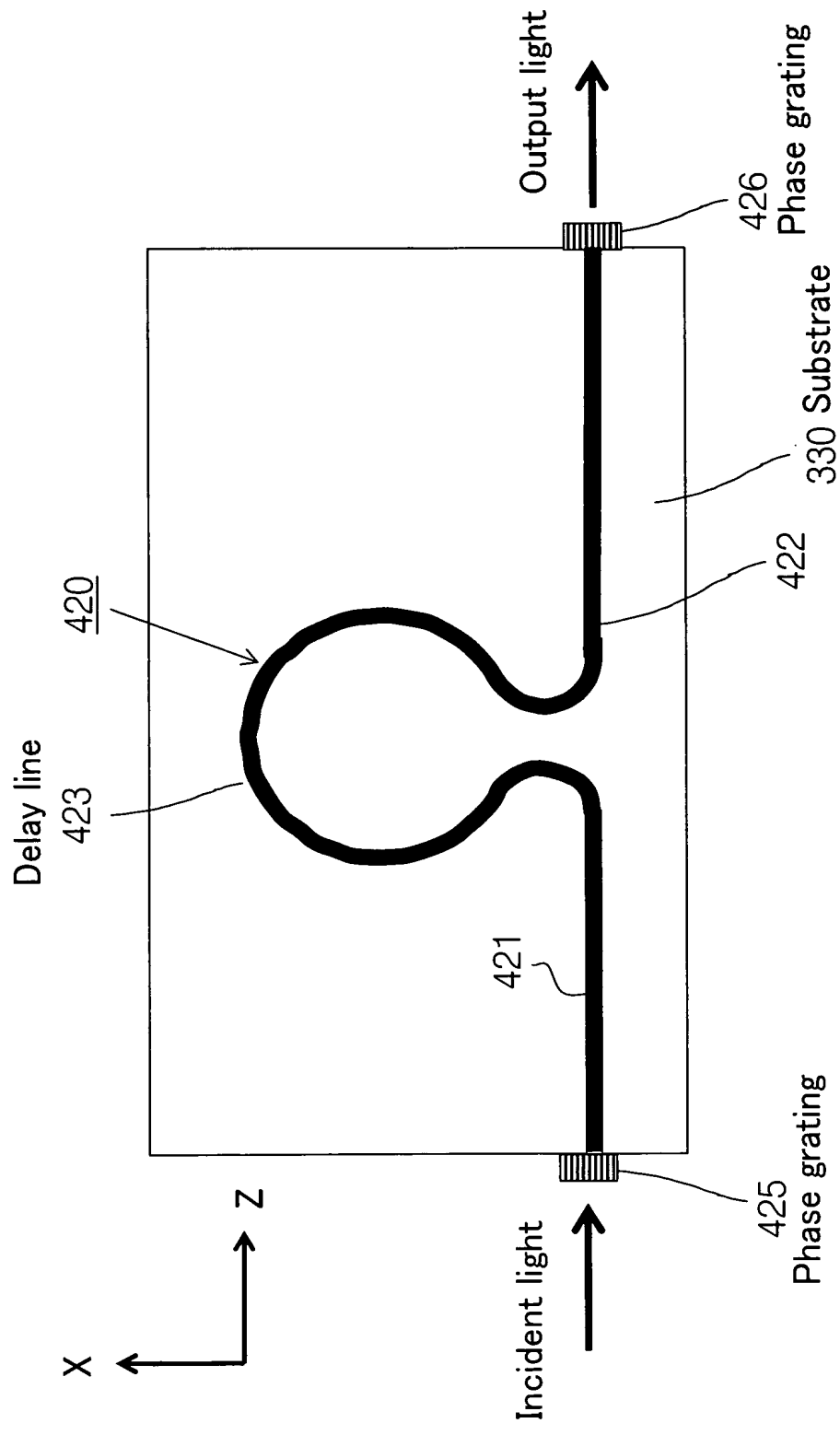


Fig. 60

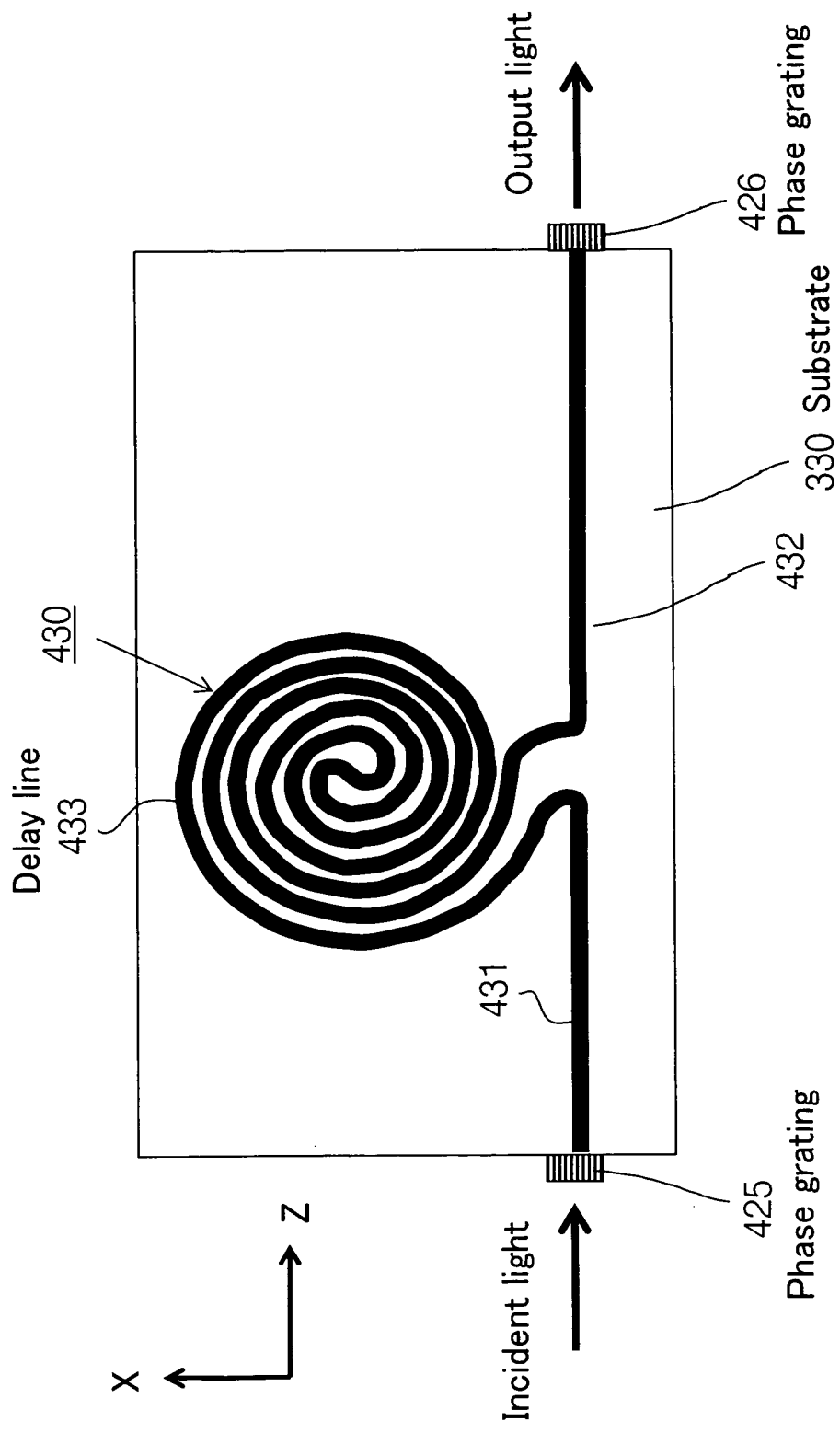


Fig. 61

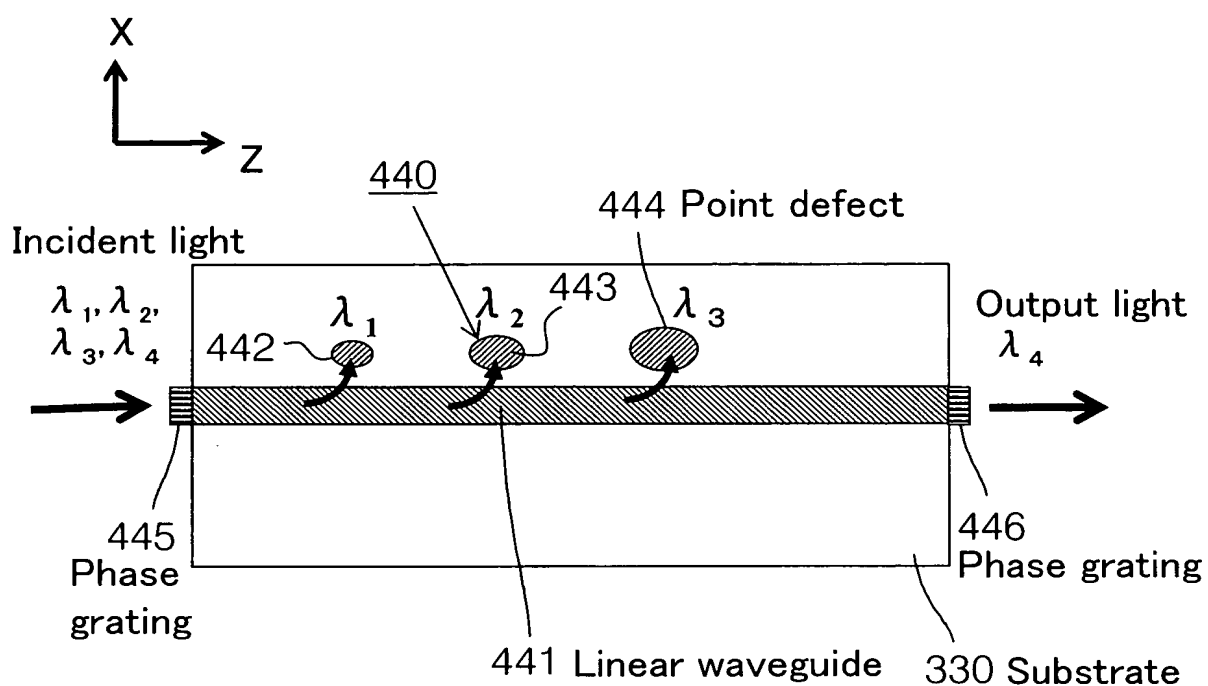


Fig. 62

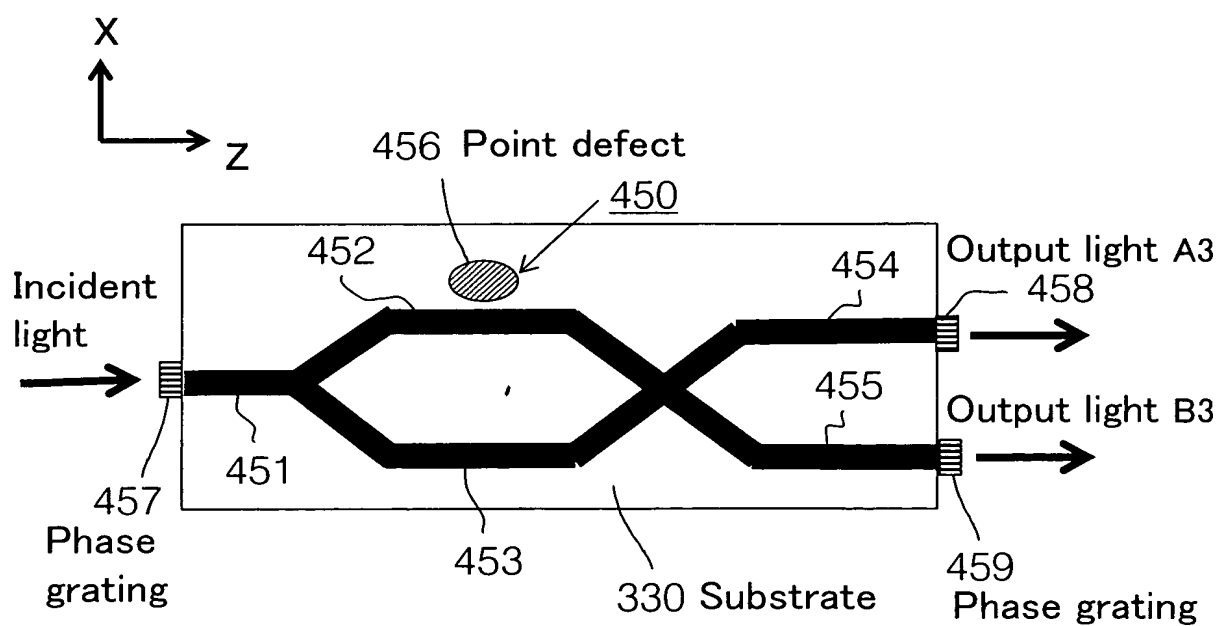


Fig. 63

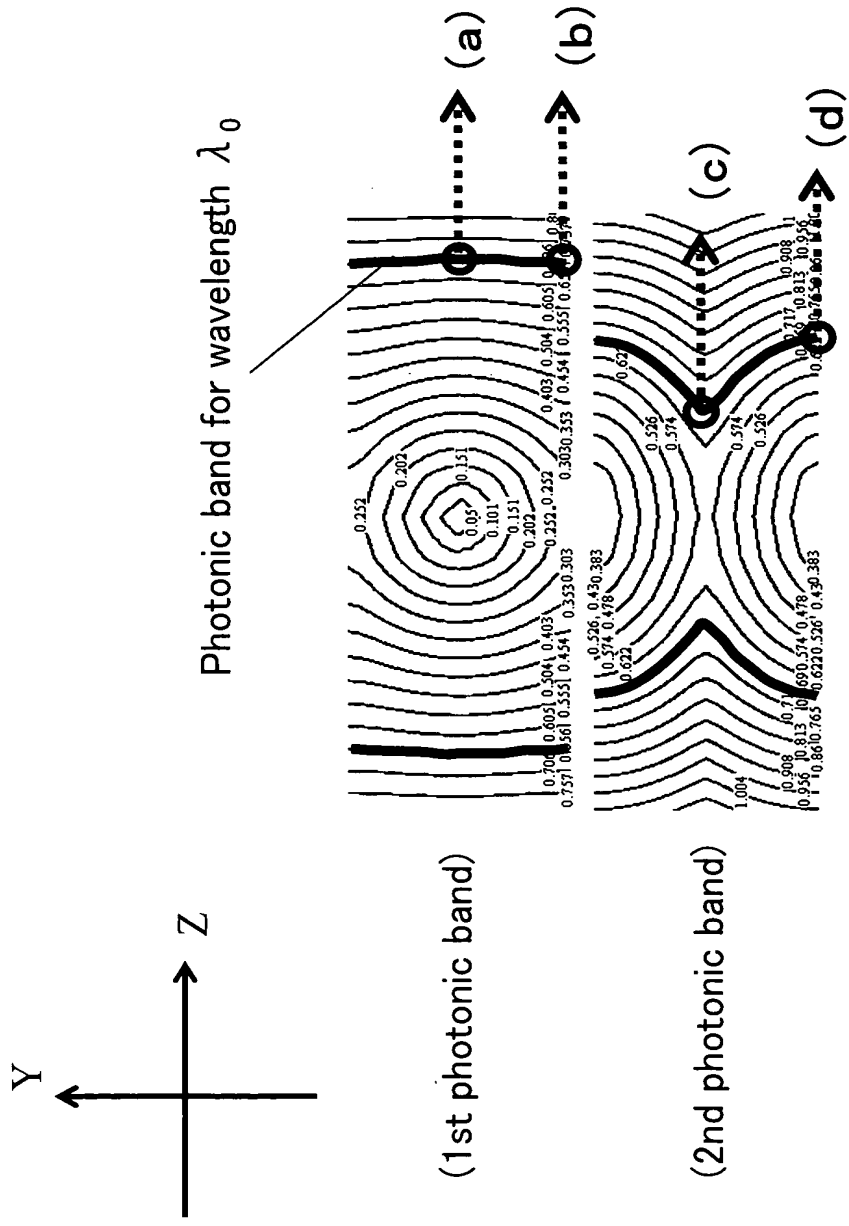
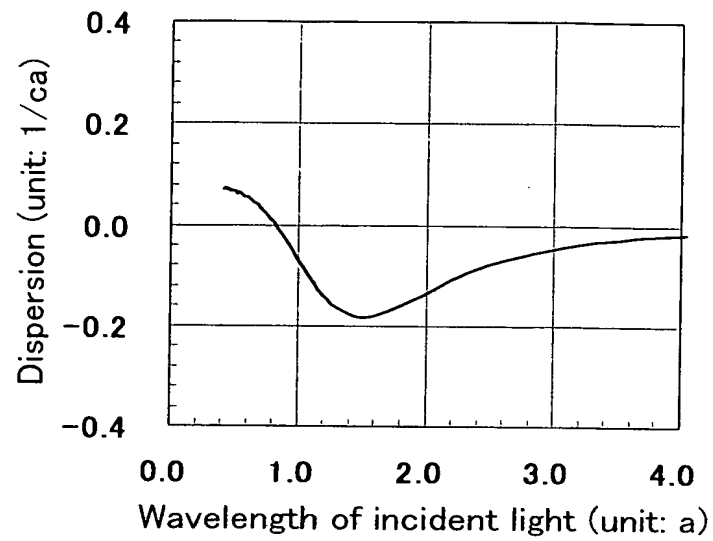
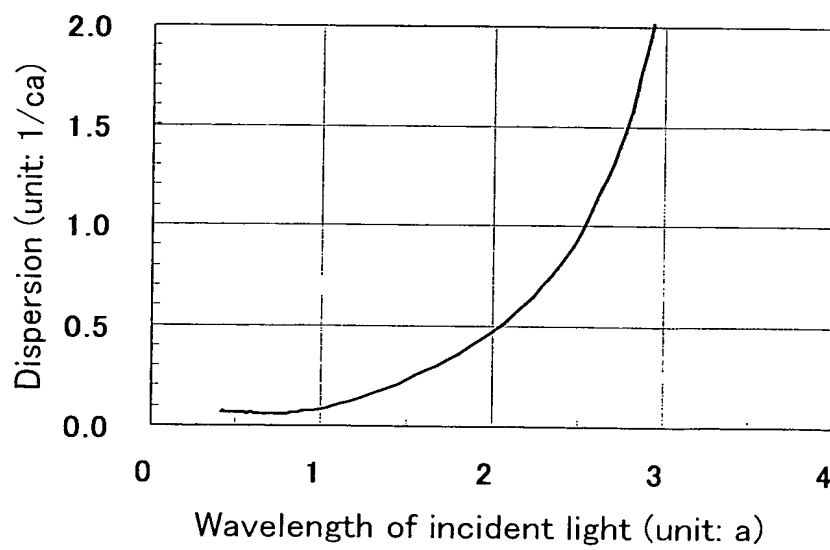


Fig. 64



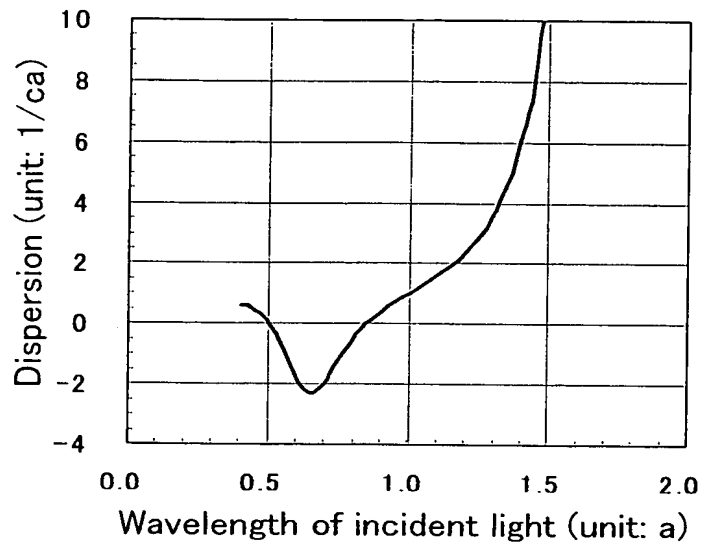
(a)

Fig. 65



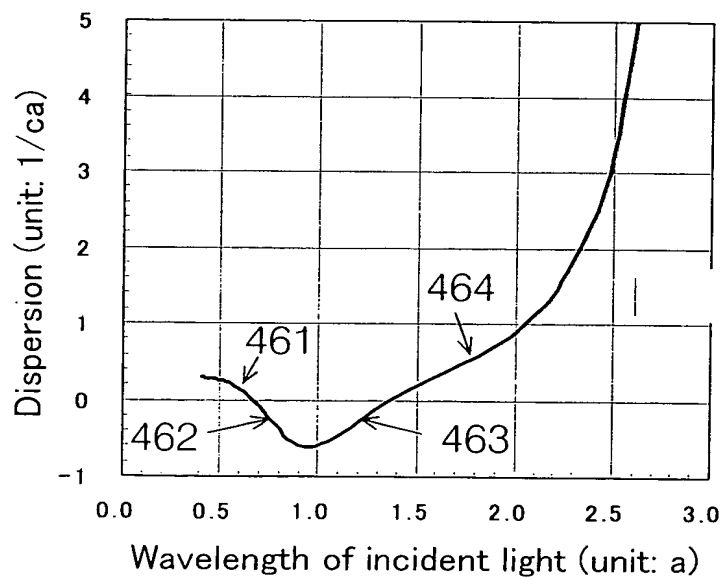
(b)

Fig. 66



(c)

Fig. 67



(d)

Fig.68

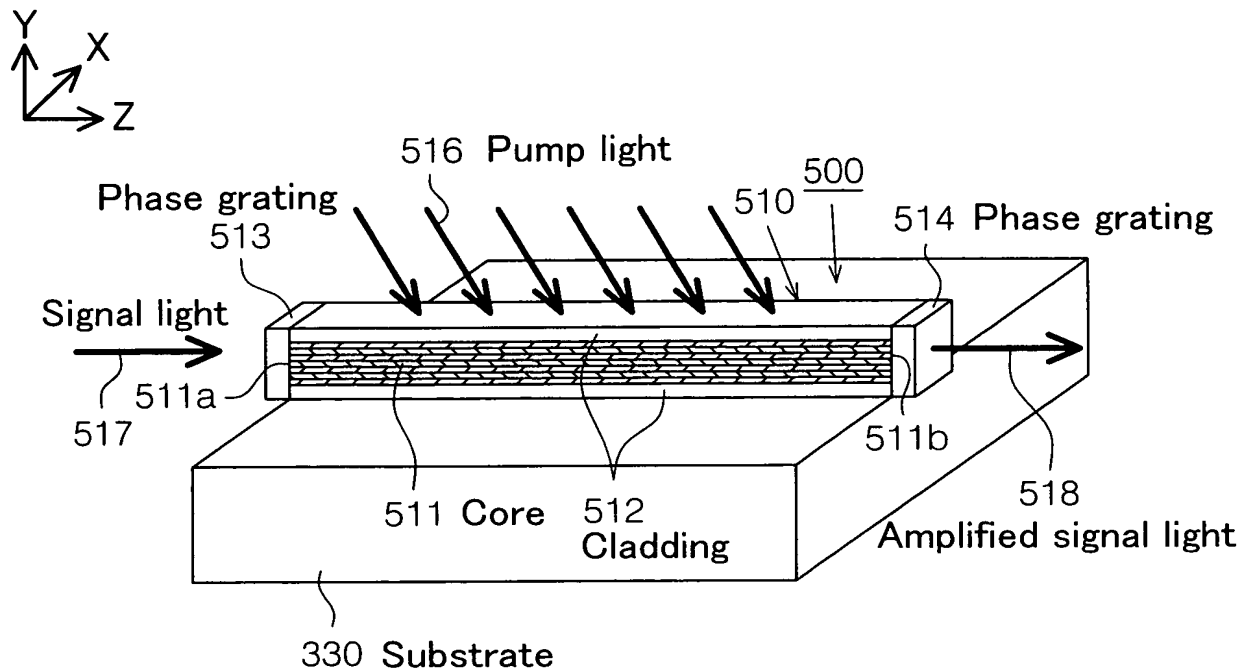


Fig.69

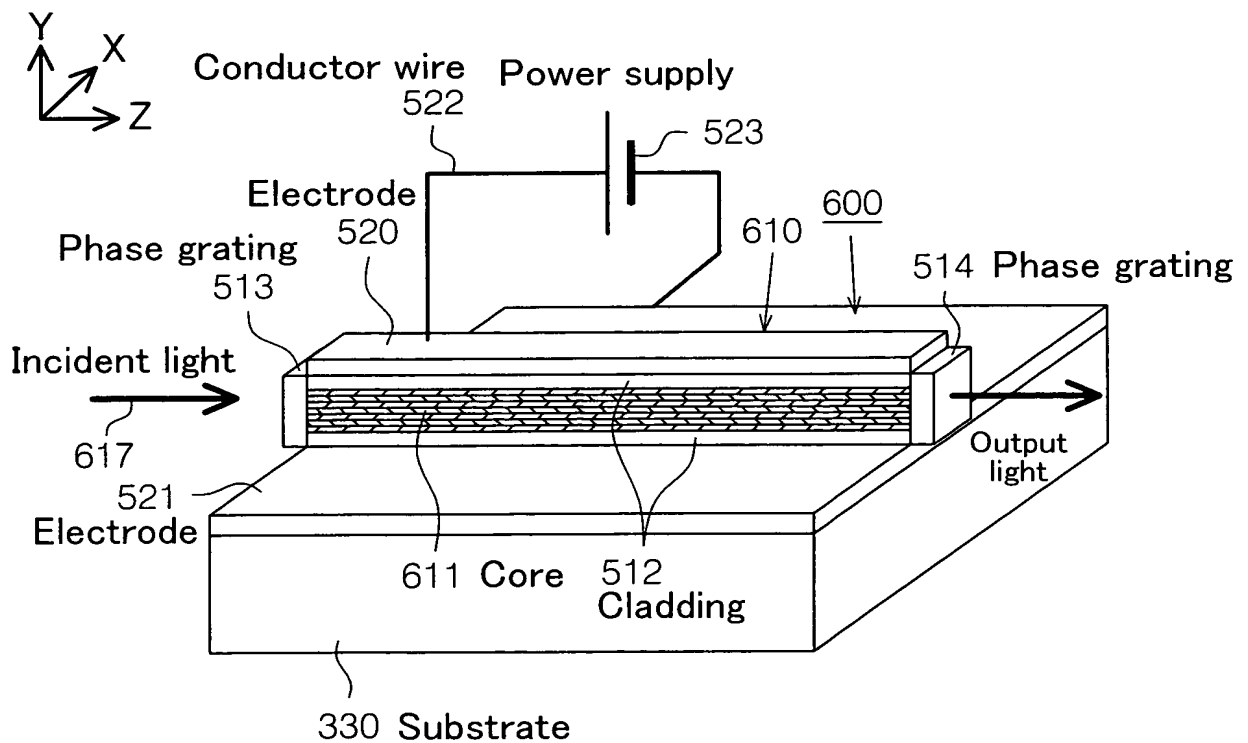


Fig.70

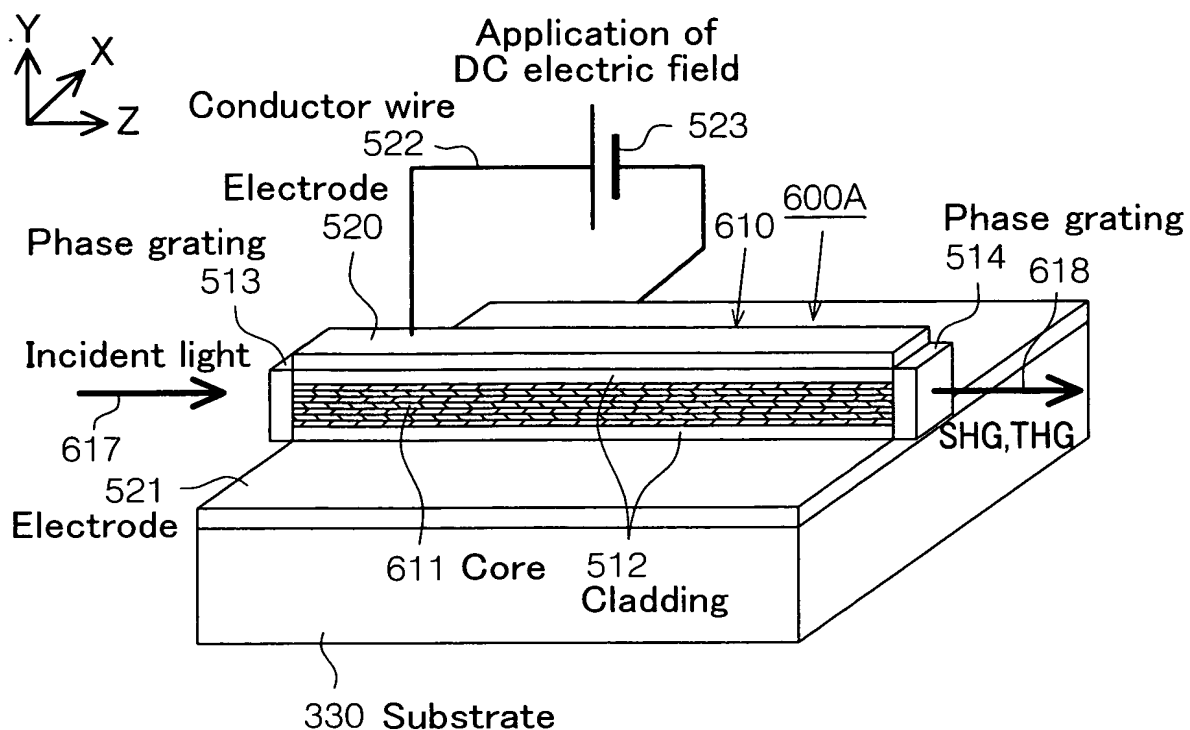


Fig.71

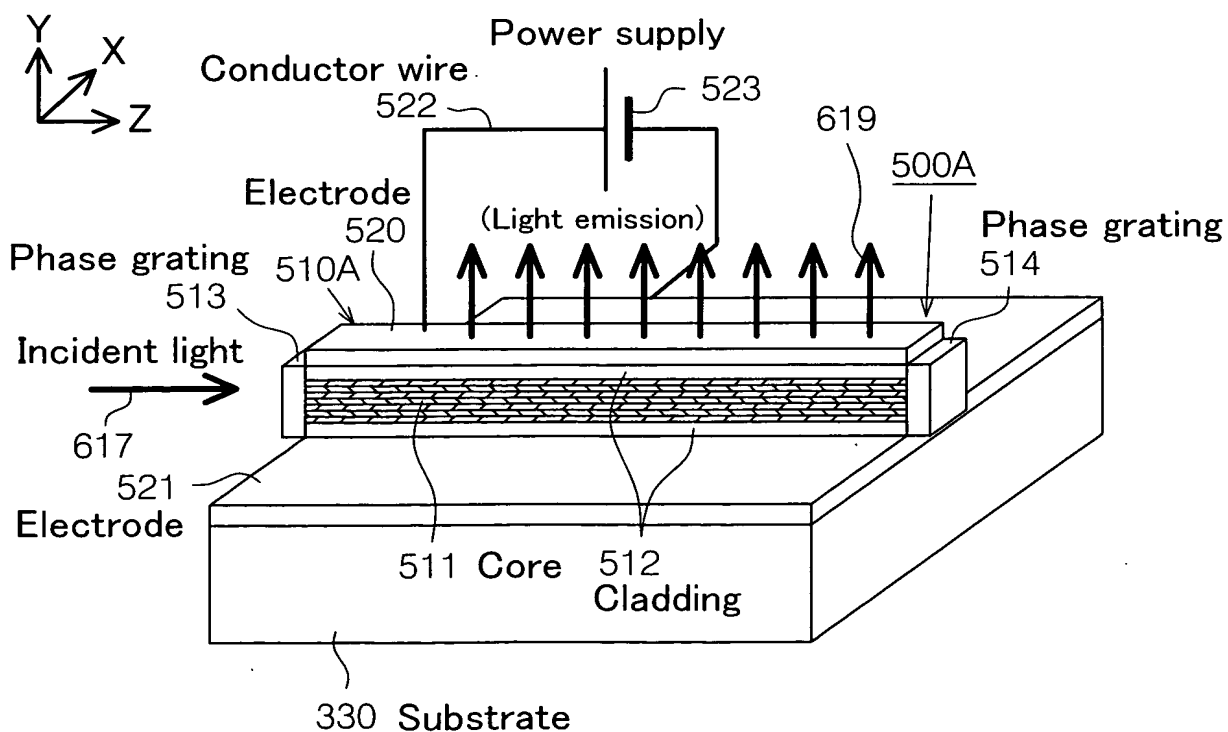


Fig.72

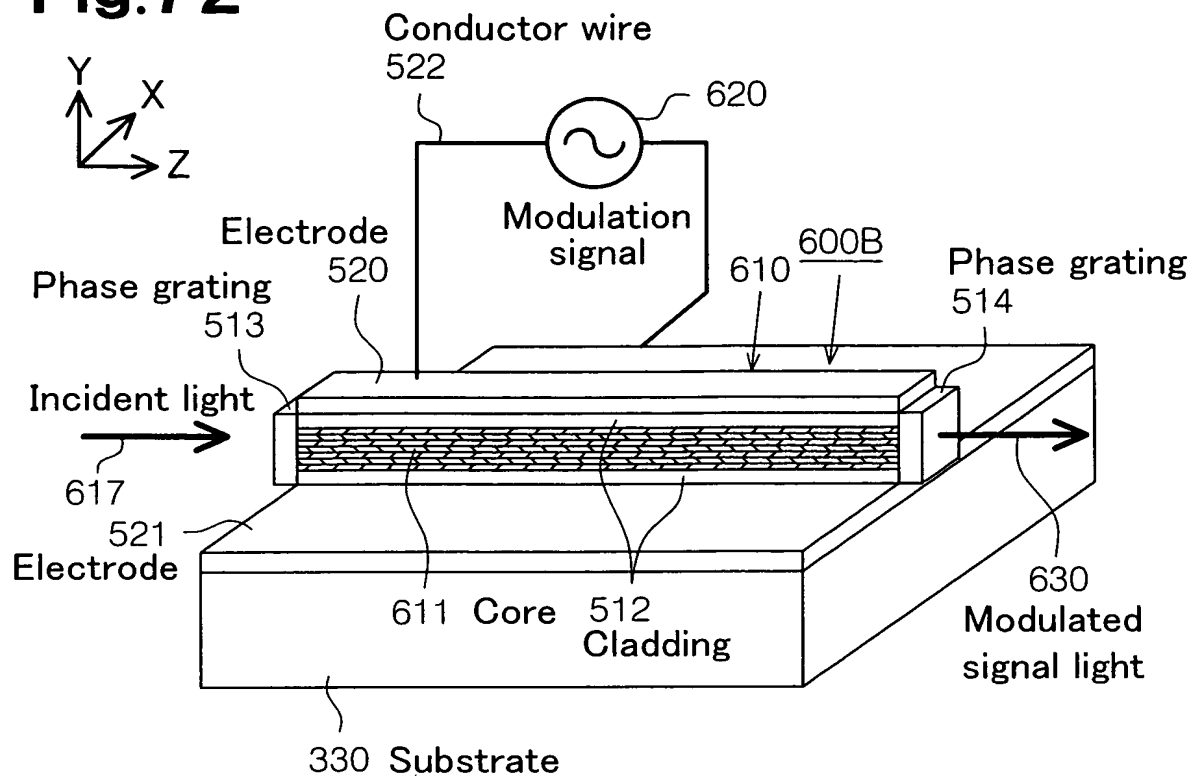


Fig. 73(a)

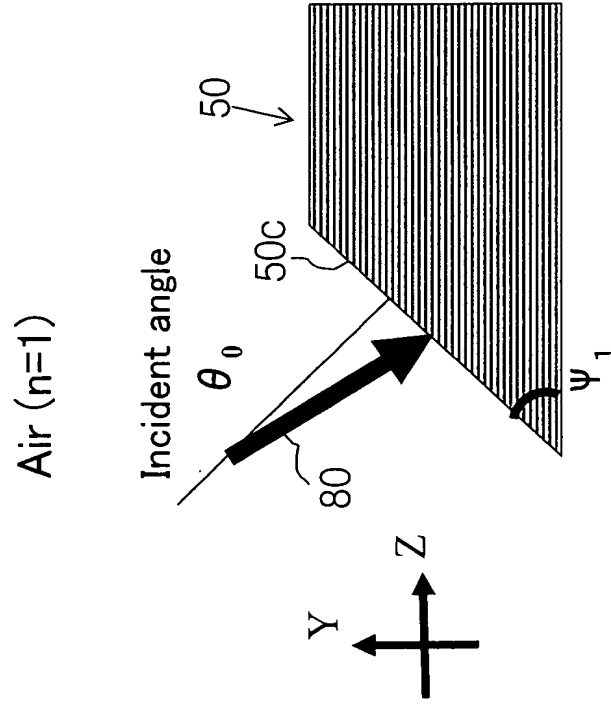
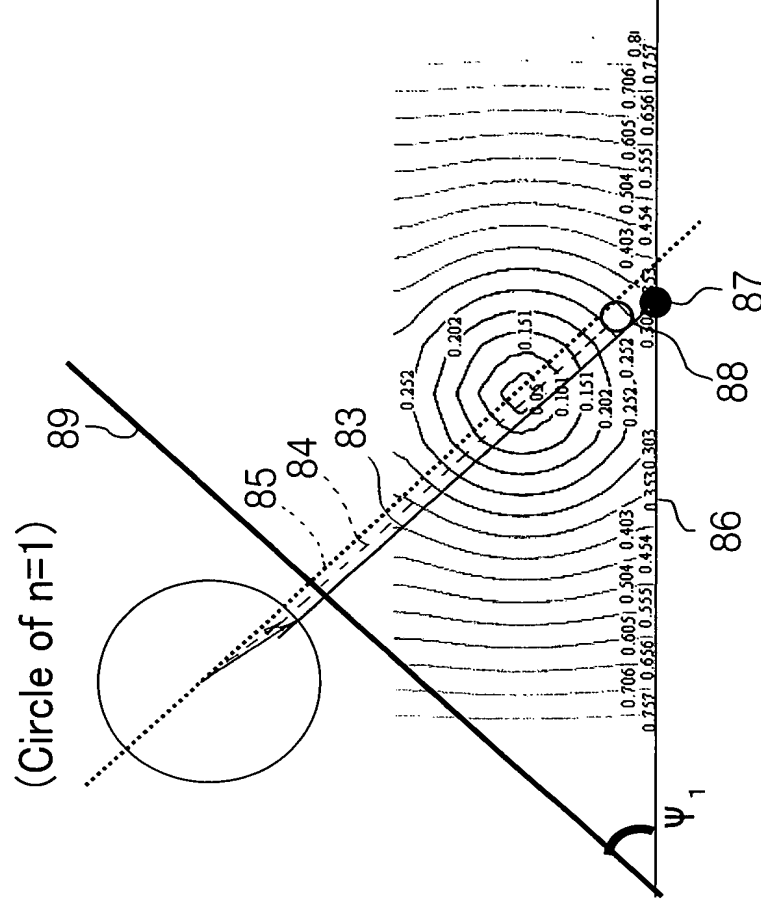


Fig. 73(b)



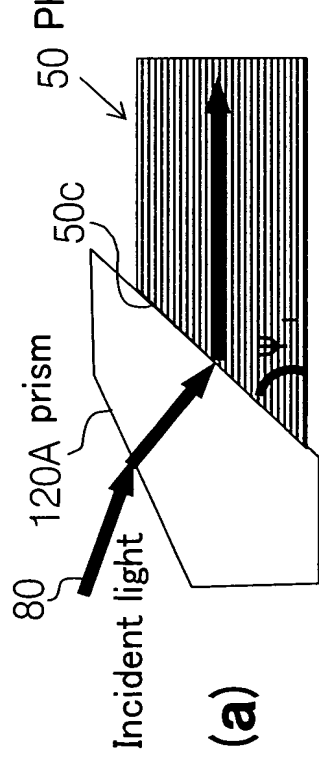
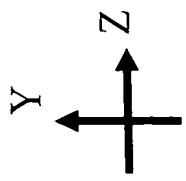


Fig. 74 (a)

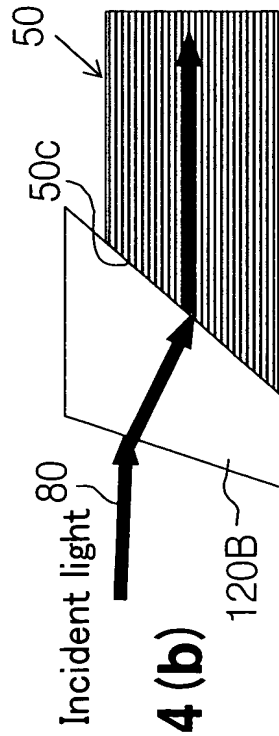


Fig. 74 (b)

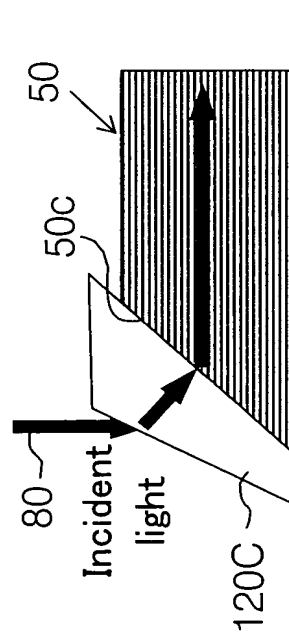


Fig. 74 (c)

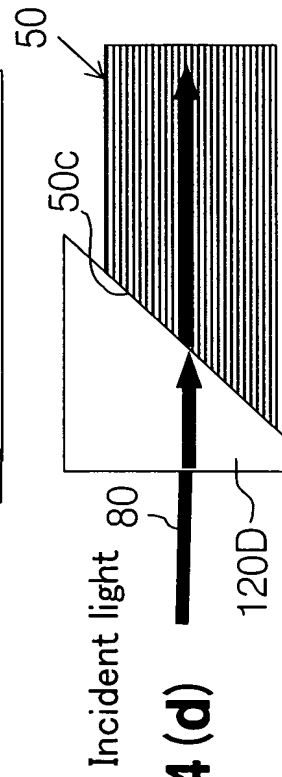


Fig. 74 (d)

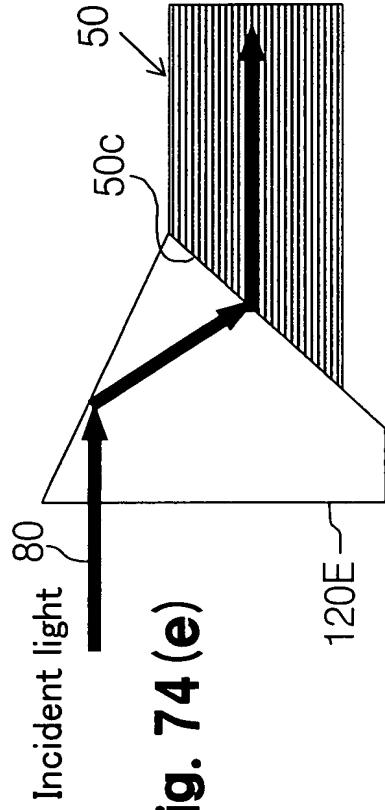


Fig. 74 (e)

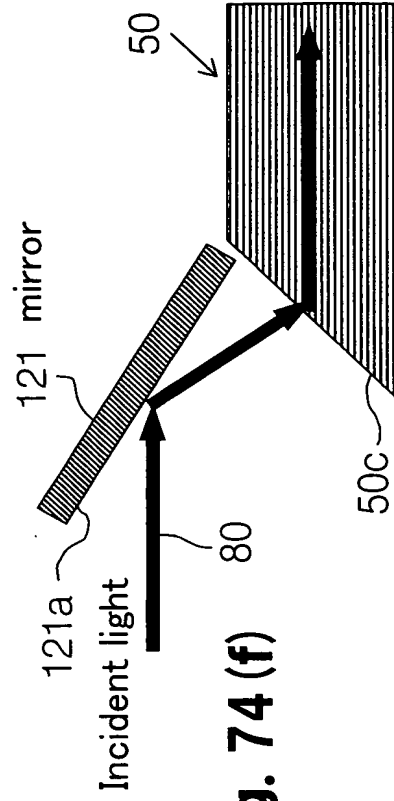
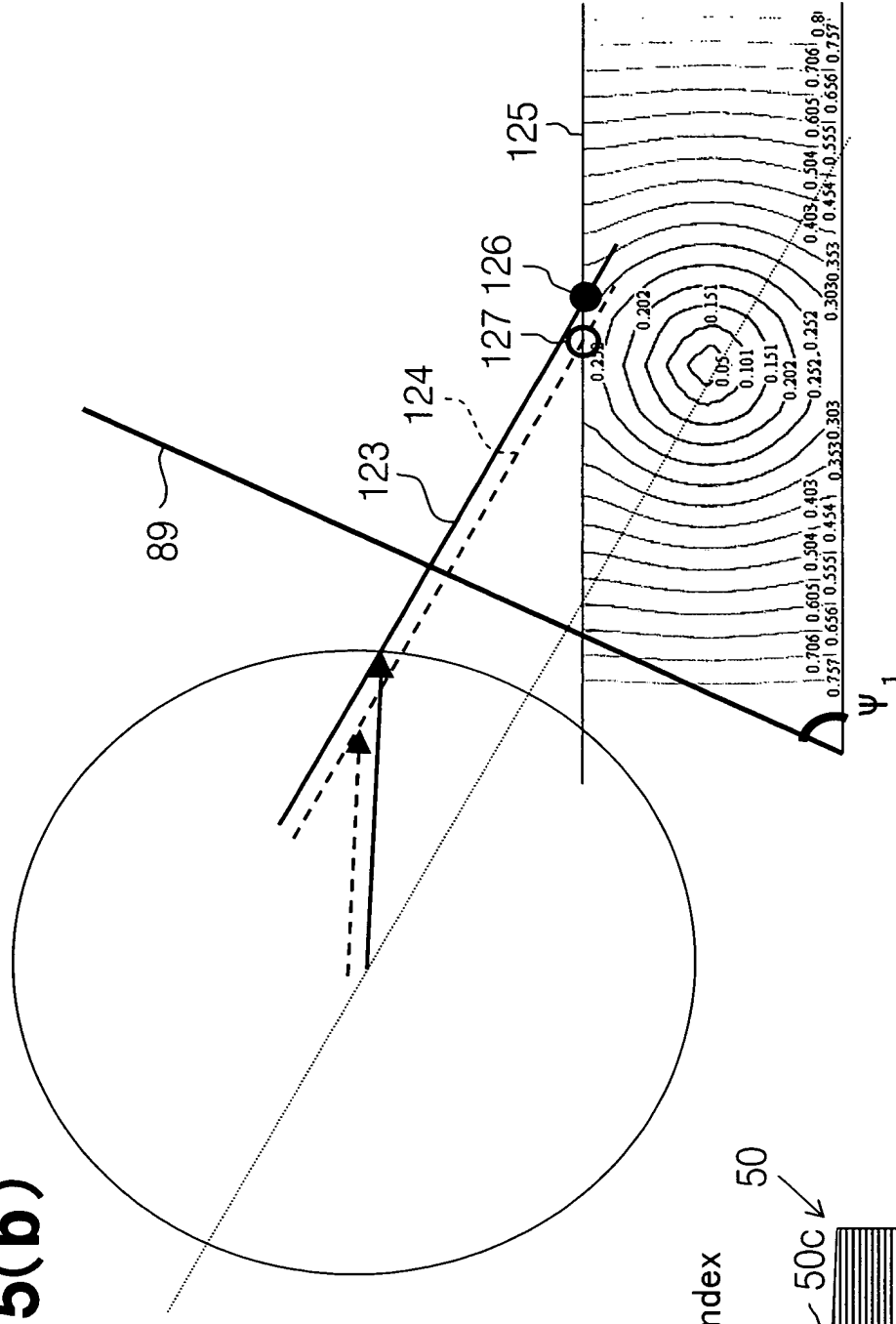


Fig. 74 (f)

Fig. 75(b)



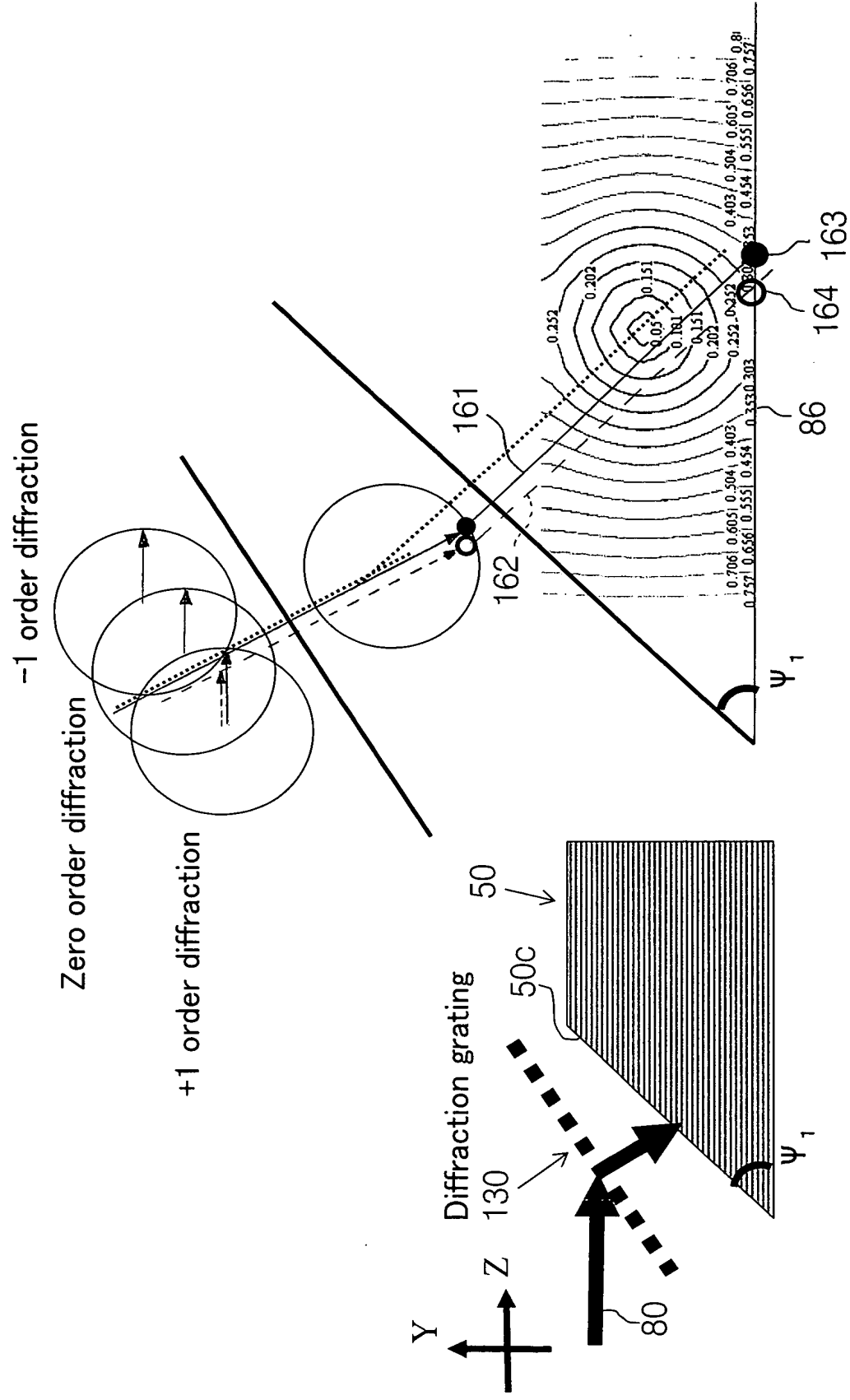


Fig. 76(a)

Fig. 76(b)

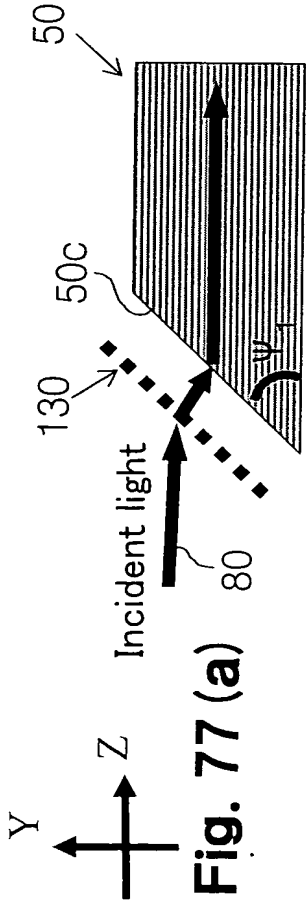


Fig. 77 (a)

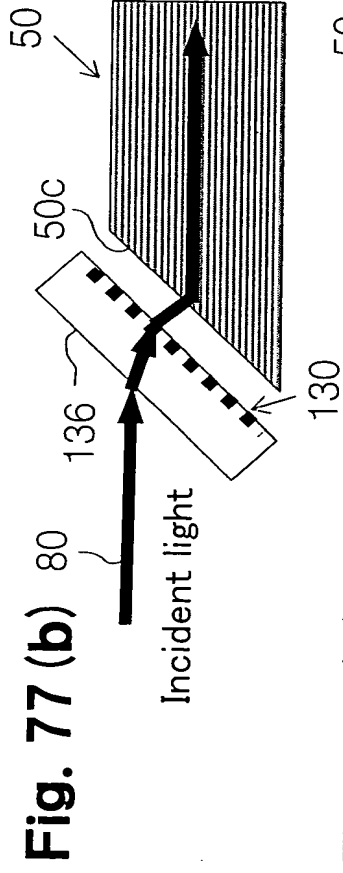
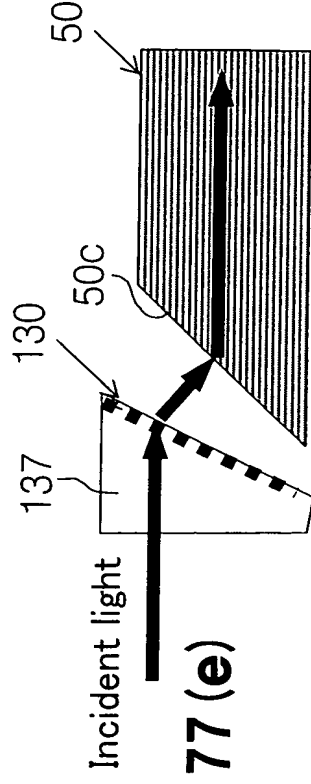


Fig. 77 (b)

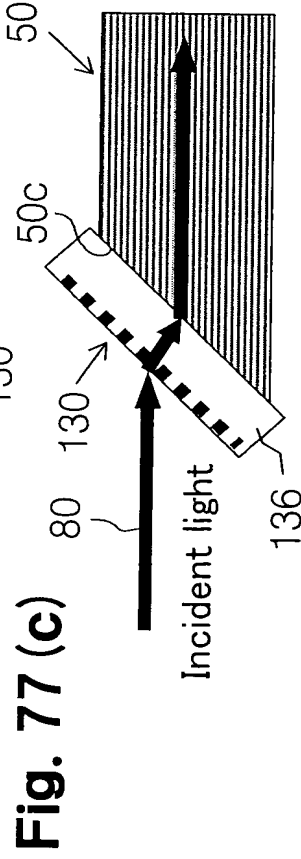
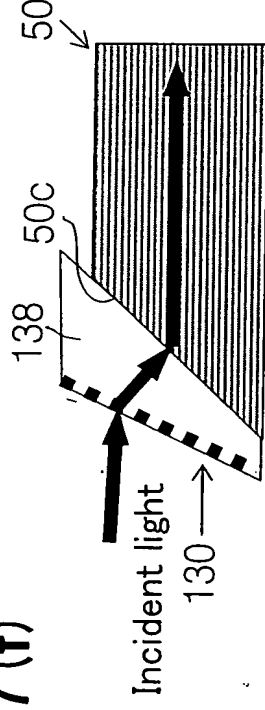


Fig. 77 (c)

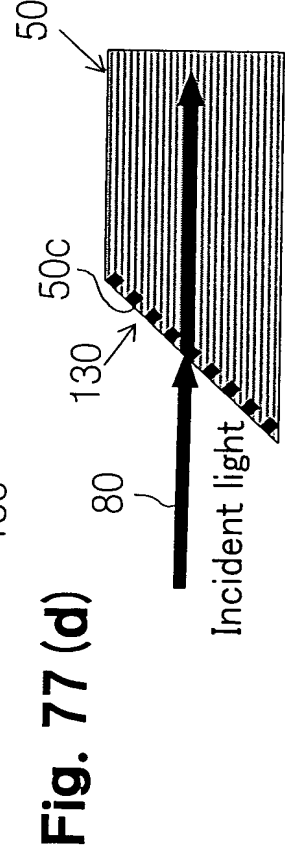
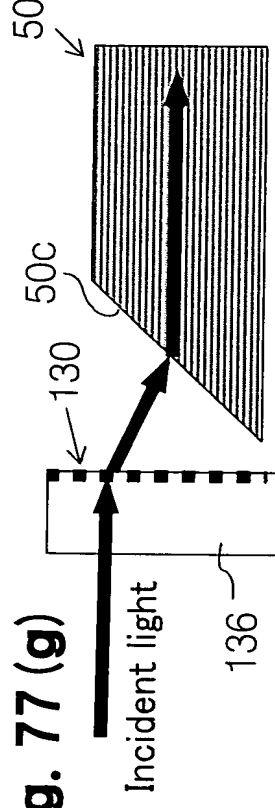


Fig. 77 (d)

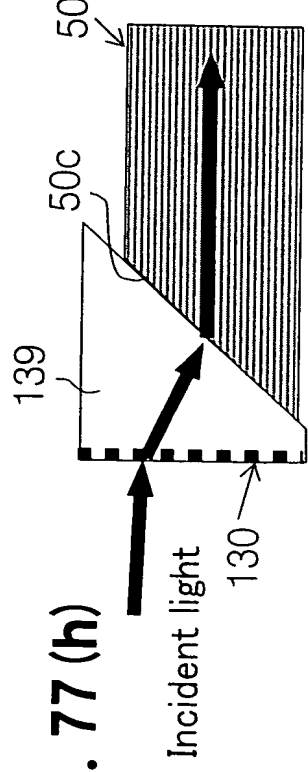


Fig. 78(b)

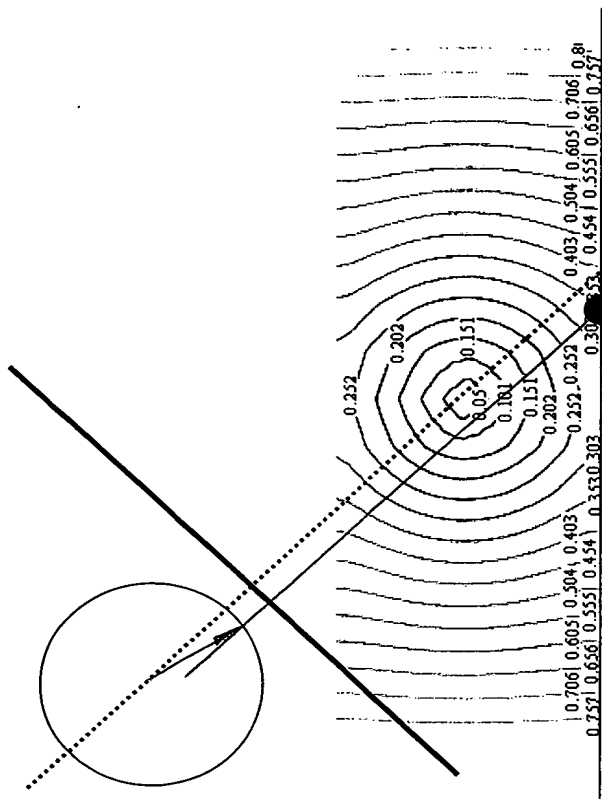


Fig. 78(a)

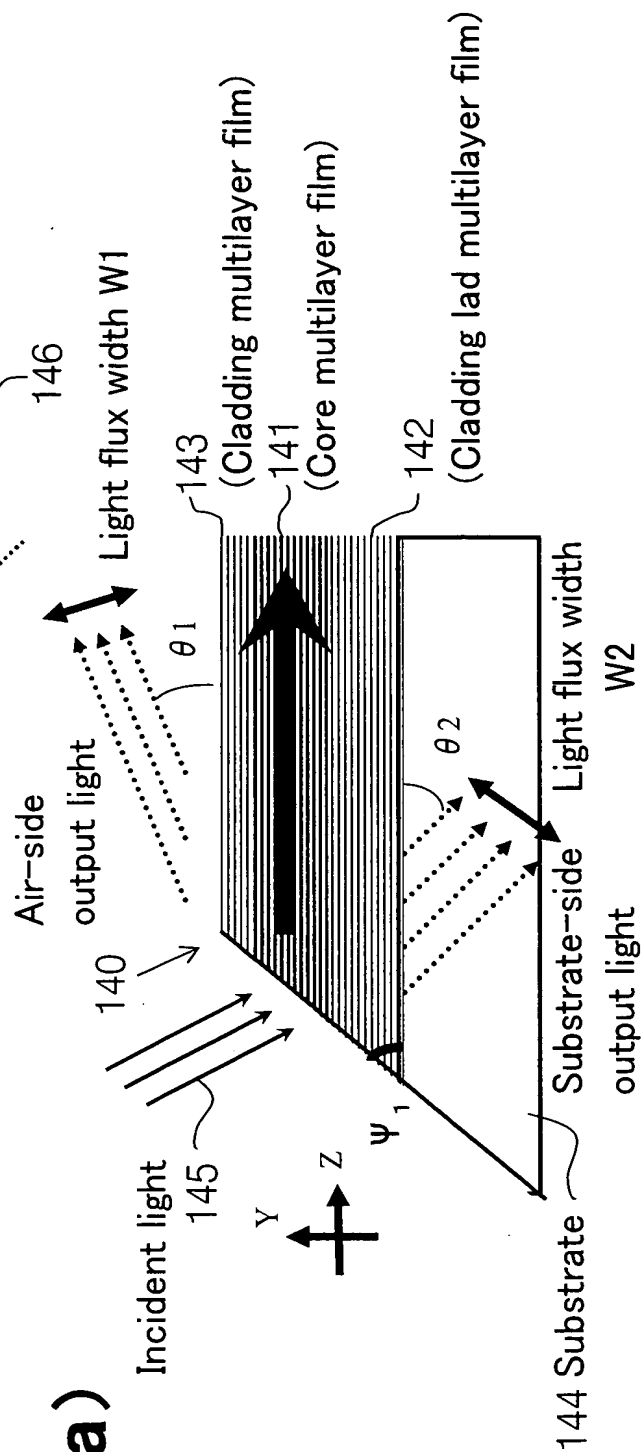


Fig. 79(a)

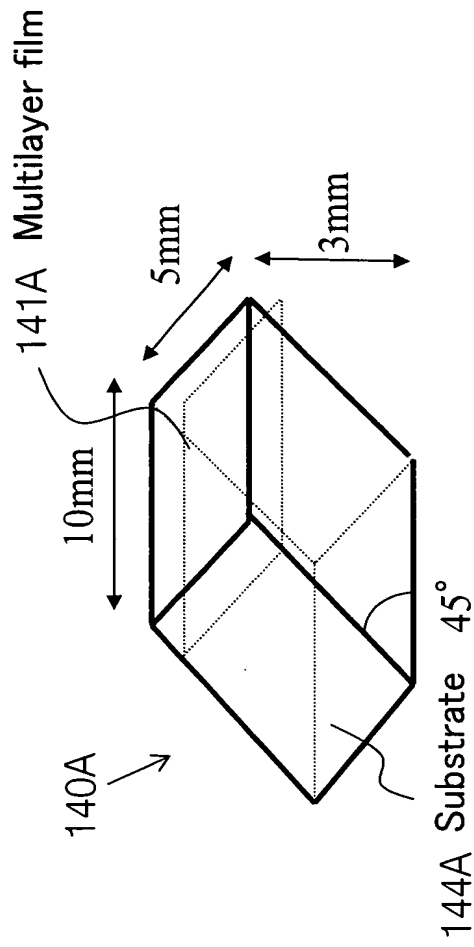


Fig. 79(b)

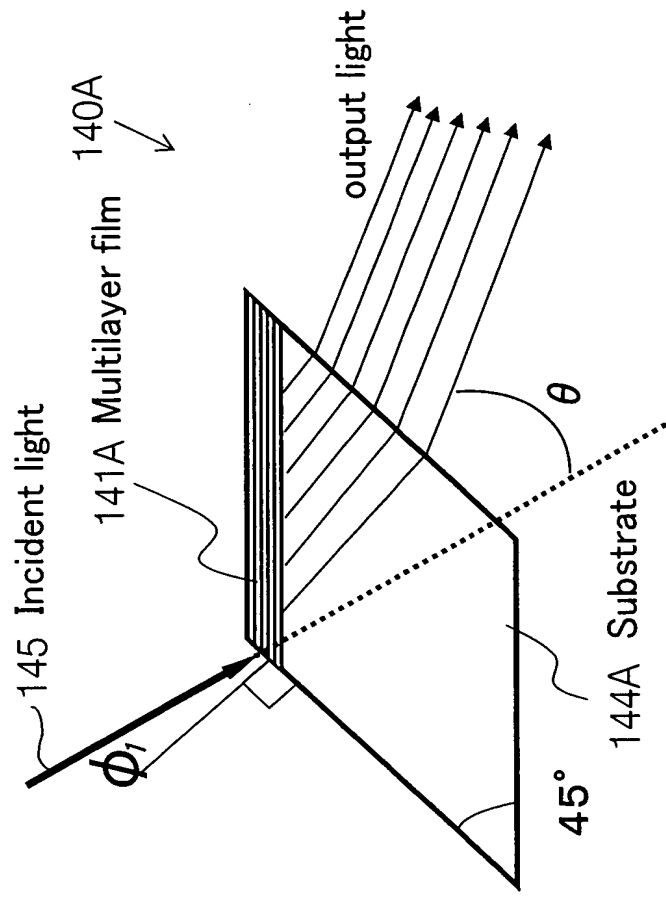


Fig. 80

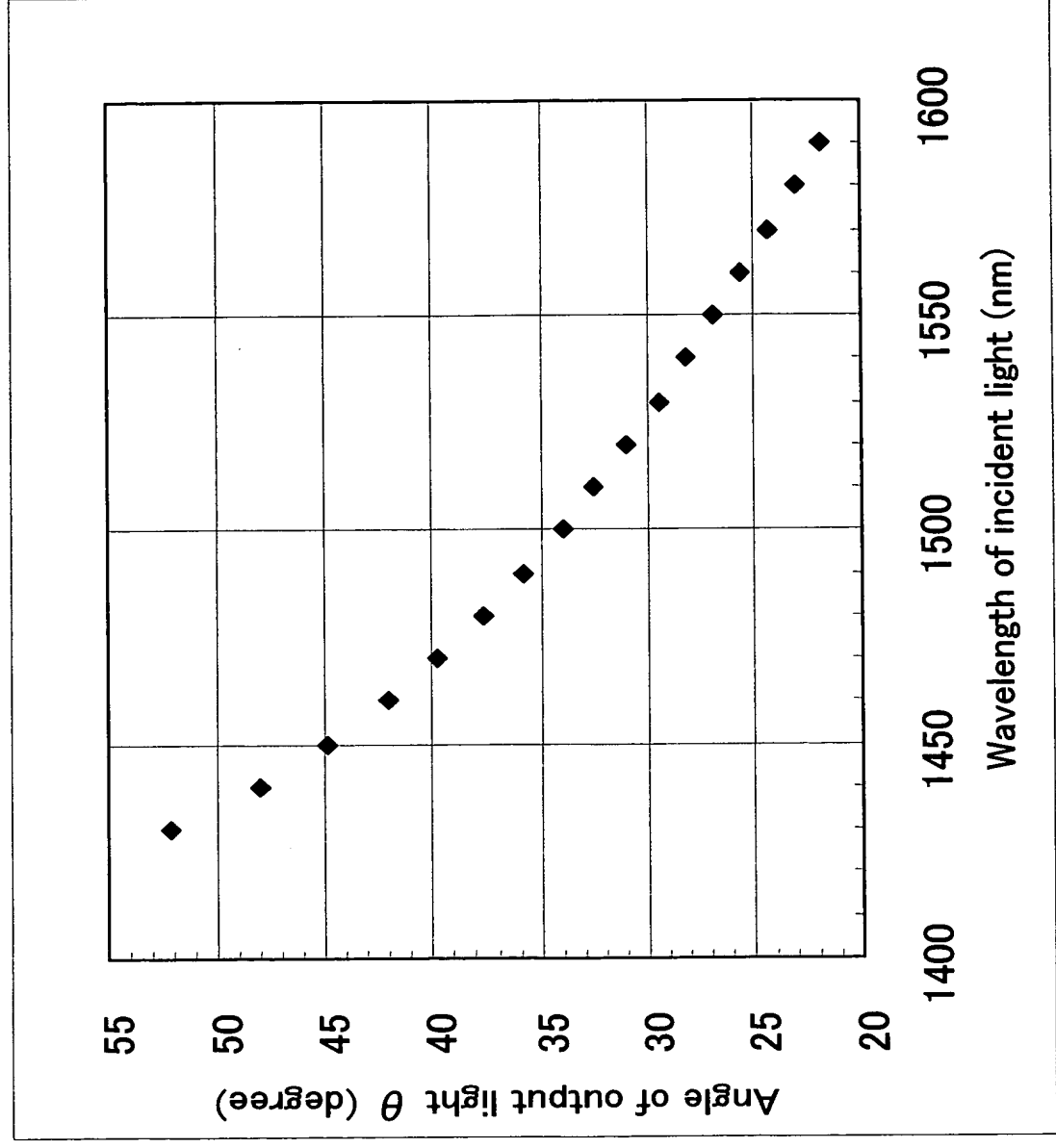


Fig. 81(a)

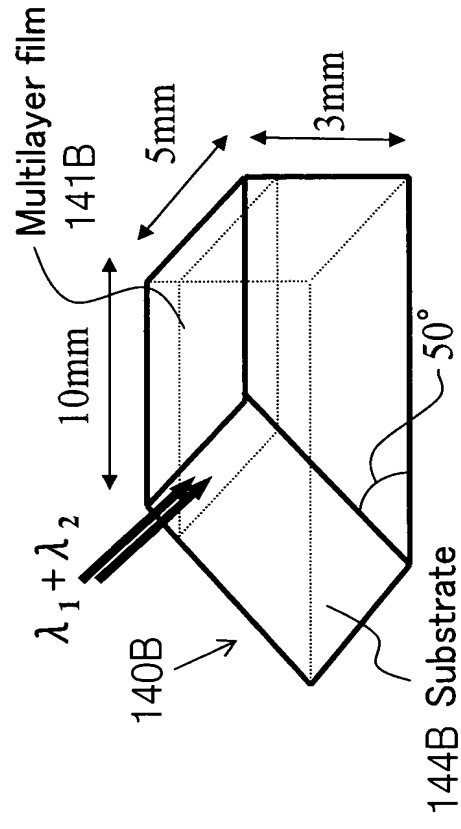


Fig. 81(b)

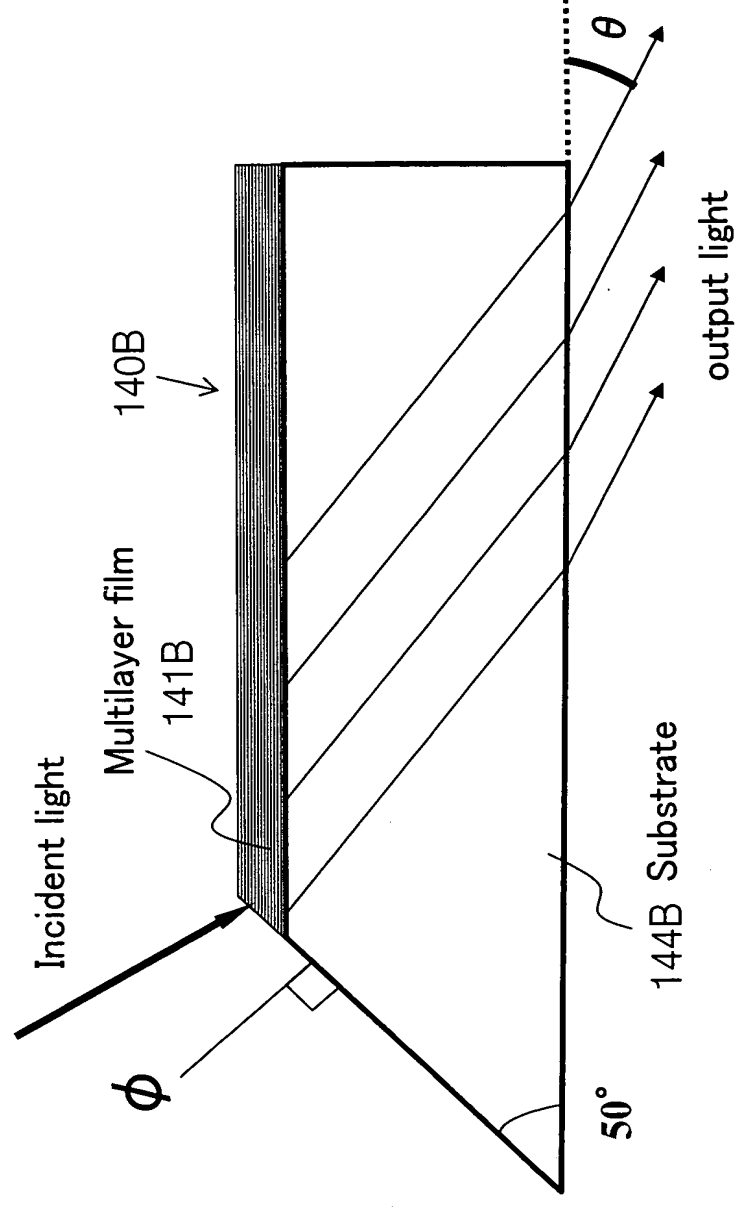


Fig. 82

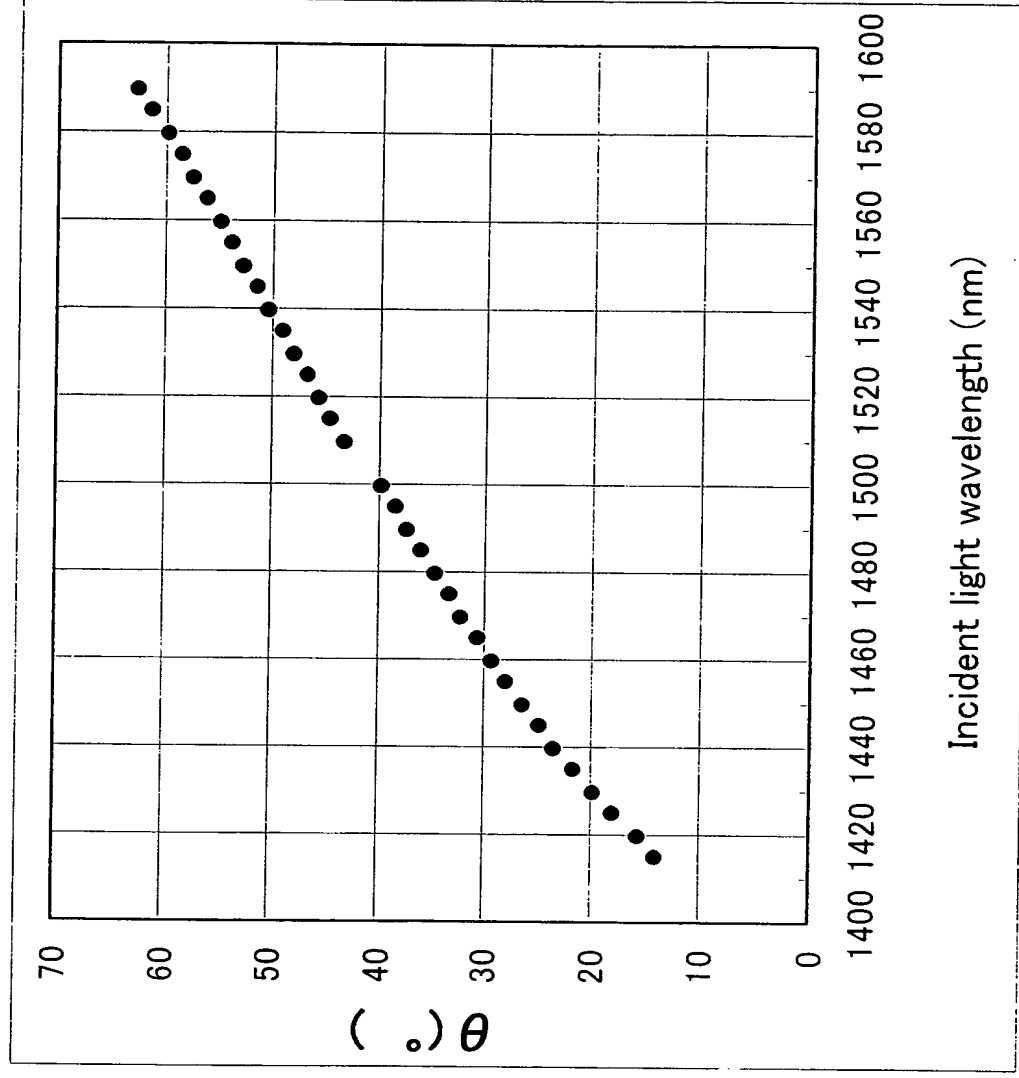


Fig. 83

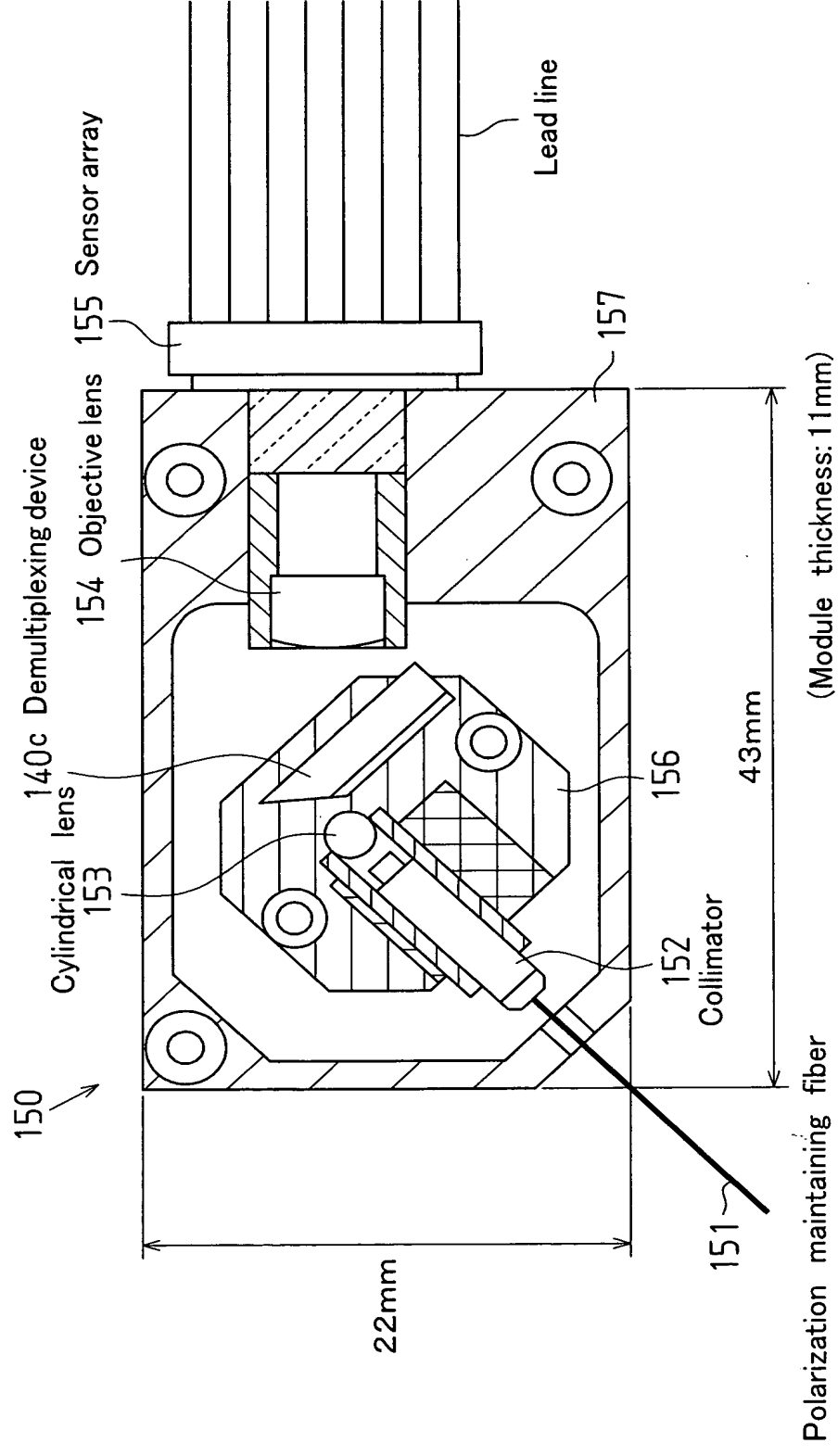
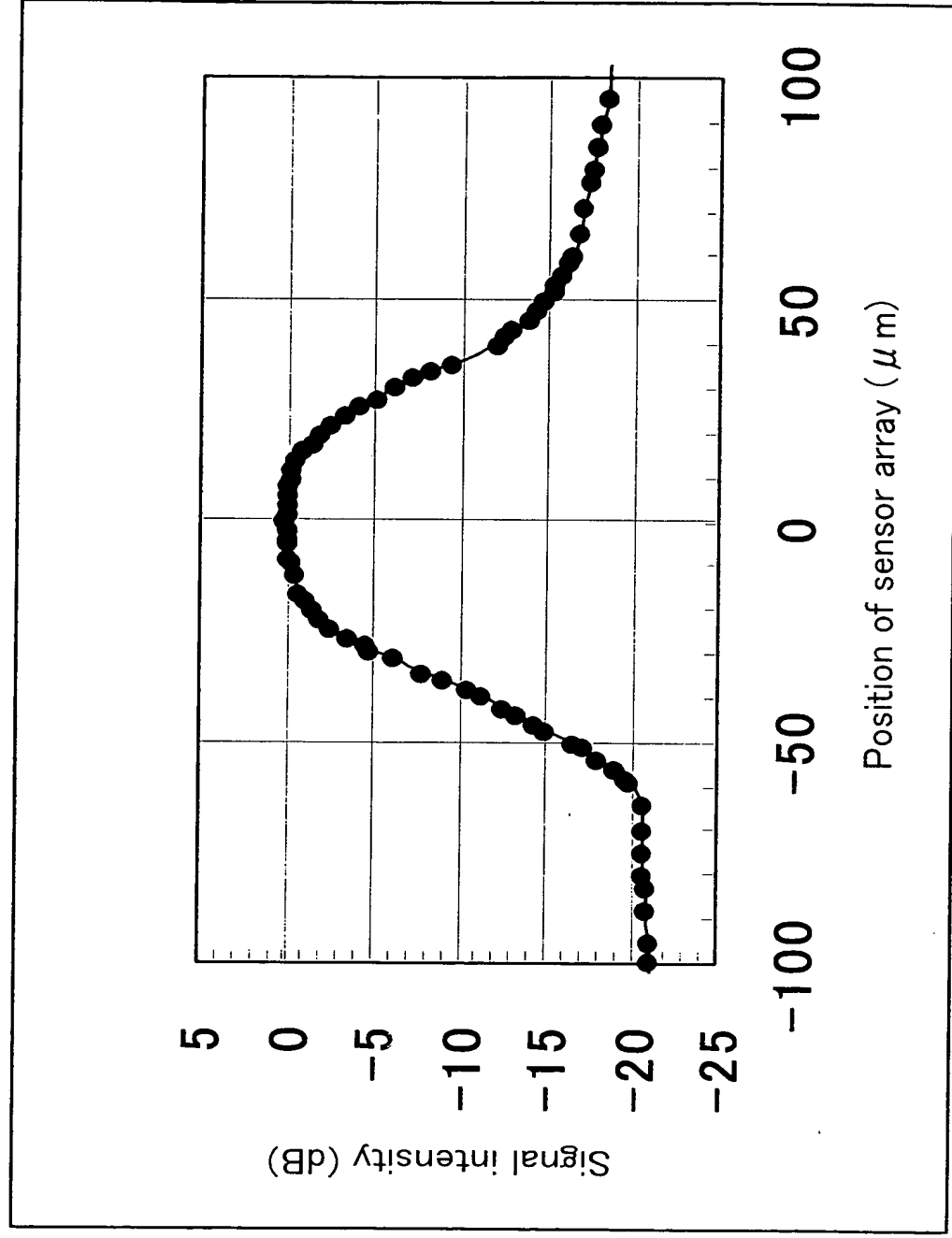


Fig. 84



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